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WILLIAM PROCTER, JR.

MEMORIAL READ AT THE AMERICAN PHARMACEUTICAL ASSOCIATION MEETING, MAY, 1900.[1]

By JOSEPH P. REMINGTON.

This distinguished pharmacist was born in the city of Baltimore, May 3, 1817. His parental ancestry can be traced to Thomas Procter, the great-great-grandfather of William Procter, Jr., who was an officer in the army under Oliver Cromwell. The descendants of Thomas Procter became converts to the doctrines of George Fox, and they are early recorded as members of the religious Society of Friends. Isaac Procter, who was the father of William Procter, Jr., and a most exemplary man, was encouraged, through the advice of his friend, Lindley Murray, the grammarian, to emigrate to America, and, after due deliberation, he determined to make America his future home. He arrived on the ship "William Penn," in September, 1793, but, owing to the prevalence of yellow fever in Philadelphia at that time, the ship was not allowed to come up to the

[1] The historical information and other facts recorded in this memorial were obtained from the files of the AMERICAN JOURNAL OF PHARMACY, other journals, and from the members of Professor Procter's family. Personal reminiscences also form a part.

[A portrait of Prof. Procter as he was better known, perhaps, to most of the older members of the American Pharmaceutical Association appeared in the Proc. A. Ph. A., 1874, Vol. XXII, and AMERICAN JOURNAL OF PHARMACY, 1874, p. 512. The accompanying frontispiece is taken from the oil painting in the museum of the Philadelphia College of Pharmacy.—EDITOR.]

city. The passengers were landed at Gloucester, N. J., and the ship then proceeded to New York to discharge her cargo. Isaac Procter, with two companions, was compelled to walk to New York, stopping at various Friends' houses on the way. He was fortunately not quarantined, and at last arrived safely in New York, but the fever soon broke out in that city, prostrating business and compelling all who could to leave the city. Isaac Procter, therefore, sought employment in the country. Upon his return to the city later on, some of his friends, of whom he had already won many by his manly conduct and high religious character, advised him to engage in the hardware business in Baltimore. He decided to do so, and opened a store at the corner of Market and Hanover Streets, which he succeeded in making one of the best known of its kind in the country.

On November 3, 1799, he was married at the Meeting House at Fallsington, Pa., to Rebecca Farquhar, whom he had met seven years before while on his way from the vessel in which he had landed to New York. She was a woman of rare moral and religious character, refined and dignified in manner and well fitted for a life companion for such a strong and good man.

William Procter, the subject of this sketch, was their ninth and youngest child. Three years after William's birth, Isaac Procter, the father, died, and it is remarkable that, having escaped death from yellow fever a number of times, he should at last have succumbed to the disease on the 7th of July, 1820. His courage is attested by the fact that he lost his life whilst devoting his time and attention to caring for the suffering during the epidemic of 1820.

After the father's death unexpected claims were made upon the estate, which, although considered by the family unjust, were not resisted, and William Procter was deprived of the liberal education that would have been so enjoyable and advantageous to one of his natural abilities. A companion of his boyhood writes: "We were boys together from six to ten years of age at a Friends' school in Baltimore, taught by a lady of rare gifts and attainments. He was studious, gentle and companionable, and greatly beloved by his teachers and classmates. His powers of observation were very early developed, and, as a child, nothing escaped his notice; he would interest boys in stones that he would pick up in the streets, or in general subjects that would arrest his own mind. Mineralogy

was his especial delight and study at this early age. While other boys would spend their weekly holidays in play, he would start early, with a lunch in his pocket and a steel hammer in his hand, and spend the whole day with a companion in the 'quarries' north of the city, or in the 'deep cuts' of the iron district, or at the 'Bare Hills.' The boys at school were always interested in his specimens, and many a young mineralogist received his taste and first lessons from this young teacher. My mind is full of pleasant and affectionate memories of him, for he was one of the brightest, purest and best boys I ever knew."

In 1831, while on a visit to his friend, Joseph C. Turnpenny, in Philadelphia, he became interested in the drug business and apprenticed himself to Henry M. Zollickoffer, at the corner of Sixth and Pine Streets, where his friend, Joseph C. Turnpenny, was employed. The two friends were soon fairly launched upon their life-work, and it must be remembered that apprenticeship in those days was a very different thing from the clerk hiring of to-day. William Procter, as an apprentice, was faithful, earnest and true, and there is little doubt that his mother's wise counsel and tender sympathies were largely instrumental in laying those most important foundation stones upon which his noble character was built. He endeared himself to his employer by his carefulness, brightness and the alacrity with which he performed all his duties. At the age of 19 he lost his mother, which was a sad blow to him. He records in his diary the following: "I have indeed lost another and only parent, who has watched over me with truly parental care and tenderness. All my hopes of repaying her unceasing kindness are now at an end, and all my dreams of pleasure about the days when I should become a cornerstone to her have vanished forever."

He entered the Philadelphia College of Pharmacy, and his studies were ever marked by an intense earnestness and a determination to make himself proficient. He graduated in March, 1837, his thesis being upon "Lobelia Inflata." He demonstrated the presence of the liquid alkaloid "lobeline," and his research attracted at once much comment. In May, 1840, he was elected a member of the College, and from that time the AMERICAN JOURNAL OF PHARMACY contained many contributions from his pen. During his apprenticeship with Mr. Zollickoffer he found leisure to study carefully a number of chemical works, and he attended special lectures given by Drs. Hare, Mitchell and Bache in the winter of 1840. In 1841

we find him occupying the position of Secretary of the College Committee for the Revision of the United States Pharmacopœia. Later, in February, 1844, he purchased the property at the southwest corner of Lombard and Ninth Streets, Philadelphia, and fitted it up as a drug store. A glimpse of his character may be afforded by the following extract from his diary written at this period: "I am about to leave Sixth and Pine Streets, after so long a residence. What singular events occur! Little did such a prospect appear probable some years ago. Steadiness and calmness of mind, how important to the proper appreciation of life! This I daily become more convinced of, and find cause to note the want of it in my own case. Reflection steadily and calmly directed to moral and intellectual improvement, with all the rigor of justice, and all the affection of mercy, how few can truly govern themselves! I have made little progress in this all-improving power, and have too frequent cause to regret acts of indiscretion and weakness."

On May 12, 1844, his store was opened, and his trials began. He wrote in his diary three months after his store was opened: "It has been a time of singular discomfort to me. The anxiety attending the opening of a new store, and the much time employed has been very burdensome. I need more faith and confidence in the course of events." The neighborhood of Ninth and Lombard Streets would not have presented many attractive prospects to most beginners, particularly to one so well qualified as Mr. Procter for advanced work in pharmacy. The square on the south side of Pine Street, between Eighth and Ninth, was an open lot, and the next street below was the boundary of the city proper, and beyond, many lawless associations were in full force. Steadily and quietly, however, Mr. Procter made his way and "bided his time." He employed his leisure moments in devising new preparations, and, having a great love for individual investigation, there is no question that at this period of his life valuable seed was sown which gave a bent and direction to his future life, from which the profession of pharmacy has derived such lasting benefit. Had he been launched directly upon a thriving and flourishing business career, it is quite possible that Mr. Procter would have closed his life richer in this world's goods, but it is doubtful whether he would have had the leisure to give so much self-sacrificing labor to the interests of his profession, and to the lasting good of his followers. The neighborhood, however, gradually improved, the extension of the city made

the erection of new houses necessary, and slowly but surely the business prospered.

William Procter's professional life-work, apart from his great desire to elevate pharmacy by every means in his power, was chiefly devoted to two objects; first, the upbuilding and development of the AMERICAN JOURNAL OF PHARMACY, and second, the education and training of pharmacists chiefly through his work as professor in the Philadelphia College of Pharmacy. It must not be understood, however, that these two objects alone occupied his energies. The American Pharmaceutical Association, of which he was the founder, the revision of the U. S. Pharmacopœia, which is filled with many contributions from his active pen, and many other interests claimed his attention. A pen picture of William Procter at this time would have shown a young man of medium height, slender, with coal black straight hair, piercing black eyes which were ready in a moment to sparkle with humor, or flash with fire at the thought of injustice done to another; active in movement, solicitous for the welfare of others, modest and retiring in disposition, faithful in his obligations, yet withal, morbidly sensitive to criticism; a charming companion to all who knew him intimately, even playful at times, but such times were always when he was "off duty with his bow unstrung;" but even at this period of his life, a close observer could not fail to realize that here was a man destined to make a mark which would outlast the eroding influences of time. Imbued with the deepest love for his profession, and possessed of buoyant youth, he cast himself with enthusiasm into his pursuits, and fortunately, having a gift of close observation, and above all a sincere love of truth, there remained but the contingency of limited physical powers to offset his career. Fortunately for pharmacy, the latter proved sufficient to sustain him through not what might be called a long life in years, but ample for a long line of achievements.

His journalistic labors began in 1846 when he was associated with Prof. Joseph Carson as co editor of the AMERICAN JOURNAL OF PHARMACY; for two years previously he had assisted Professor Carson in its editorial management. In 1850 Professor Carson resigned his position, and Professor Procter assumed sole editorial charge. In 1853 the JOURNAL was enlarged by the issue of six numbers annually in place of four. In 1871 the issue of the JOURNAL was made monthly. Professor Procter inaugurated the

monthly issue, and after editing the April number resigned his position, and was succeeded by Prof. John M. Maisch. He had contemplated a relinquishment of his editorial duties for some time, and in a written communication to the College some months previously, had advocated a monthly issue of the JOURNAL, and requested to be relieved from the editorship as early as the College could find a suitable successor.

For twenty years the JOURNAL had been under his management in its editorial department, and how successfully that management was conducted the volumes issued during that period are the best testimony. The original matter from his pen, and his judicious selections, gave to it a value and standing among American pharmacists, and made it the most complete history extant of the progress of pharmaceutical science in the United States. As an editor, he was just to all contributors, forbearing in criticism, never indulging in personal or sarcastic comments, ever ready to expose fraud and empiricism, loving truth, and sometimes proclaiming it when it was a disagreeable duty.

After resigning the editorship, his time was so much occupied by his business that his name does not appear as a direct contributor to the JOURNAL; in April, 1871, appeared an article from his pen on "Pharmaceutical Titles," the last of the long series. The General Index of the JOURNAL exhibits seven columns, numbering some 550 items, under his name, exclusive of extracts and editorials. We think it may safely be said without disparagement to any of his predecessors in the editorial management of the JOURNAL, that the College was fortunate in placing the JOURNAL in his hands. No man of the time could have been placed on the outlook commanding the horizon of pharmaceutical literature whose heart was more thoroughly engaged in the work, and who was gifted with quicker perception or better judgment. His name will ever be associated with the progress of pharmacy in the United States, and the twenty volumes of the JOURNAL which bear his name as editor remain a monument to his genius and zeal.

A complete review of the published essays of Professor Procter would occupy too much space for this memoir, and we can only allude to a few of them. His thesis in 1837 on "Lobelia Inflata," in which he demonstrates the presence in the plant of an alkaloid, describes the salt formed by union of the principal acids with the alkaloid, and proposes the name of lobelina for the active principle.

Three years previous, S. Calhoun, M.D., Professor of Materia Medica in Jefferson Medical College, Philadelphia, published in the AMERICAN JOURNAL OF PHARMACY, Vol. V, the investigation of an acidified extract from lobelia, which foreshadowed the presence of an alkaloid, but did not succeed in isolating the principle. Professor Procter was aware of Dr. Calhoun's investigation, and refers to it in his supplementary paper, published in 1841—a "casual omission," as he states, in not having done so in his thesis. In November, 1850, Mr. William Bastick read a paper before the Pharmaceutical Society of Great Britain on "Lobelia Inflata." He refers to Dr. Calhoun's paper, but evidently was not aware of Professor Procter's researches in 1837 and 1841. Mr. Bastick isolated the alkaloid and describes it, and his name is associated in the books with its discovery. In January, 1851, Professor Procter writes to the editor of the *Pharmaceutical Journal*, London, as follows: "For some reason, these (my) essays appear to have been entirely overlooked by the press and writers on your side of the Atlantic, and now that the drug is attracting the attention of your medical men, its chemical relations are exciting the curiosity of your pharmaceutists. I should not have taken the trouble to bring their existence to your notice, had I not observed the paper of Mr. Bastick in your journal for December, in which he states his ignorance of any previous researches having the same tendency as his own."

The *Pharmaceutical Journal* then published Professor Procter's essay, placing him thirteen years in advance of Mr. Bastick as the discoverer of lobelina.

In the same year with the publication of his thesis, we have "Remarks on an Oil Obtained by Distillation from Wild Cherry Bark, and Evidences of Its Similarity to Oil of Bitter Almonds."

In 1838, a paper "Demonstrating the Existence of Amygdalin in Several Species of the Genera Prunus and Amygdalus."

In 1839, "Observations on Dextrin and Diastase," and "On Lobelia Cardinalis," showing the presence in that plant of an alkaloid differing in some respects from the alkaloid found in Lobelia inflata.

In 1840, a paper "On the Power of Saccharine Substances in Protecting from Decomposition Solution of Protiodide of Iron."

In 1841, an essay "Supplementing his Thesis on Lobelia Inflata, and Showing that the Alkaloid Therein Described Represents the Plant in Medicinal Qualities."

In 1842, "Observations on the Volatile Oil of Gaultheria Procumbens, Proving it to be a Hydracid Analogous to Salicylous Acid."

A year later, M. August Cahours took up the same subject, and arrived at the same results by a proximate analysis of the oil, but in his paper, published in the *Journal de Pharmacie et de Chimie*, March, 1843, he makes no allusion to Mr. Procter's previous publication, leaving us uncertain whether he had seen Mr. Procter's paper, or whether the investigation made by him was coincident with that of Mr. Procter.

In 1843, "On the Volatile Oil of Betula Lenta (Sweet Brier) and on Gaultherin," a substance playing a part similar to amygdalin, and which, by its decomposition, yields an oil identical with oil of gaultheria.

In 1847, "On the Reduction of Oxide of Iron by Hydrogen."

In 1849, "Remarks on the Oleo-resinous Ethereal Extracts, their Preparation and the Advantages they Offer to the Medical Practitioner."

In 1851, among numerous contributions, we have an essay "On the Botanical and Chemical Character of Sassy Bark (the Doom Plant) of Western Africa."

In 1852, a continuation of the essay on sassy bark, and "Observations on the Volatility and Solubility of Cantharidin, in View of an Eligible Pharmaceutical Treatment of Spanish Flies."

In 1853, fluid extracts began to attract attention, and in this and the succeeding year he contributed several papers on that subject; also, one "On the Pharmacy of the Phosphates."

In 1858, "An Essay on the Hypophosphites."

In 1859, "On Polygalic Acid," and "On the Existence of Nicotina in Green Tobacco." In the same year he read before the American Pharmaceutical Association, in Boston, an elaborate essay on fluid extracts, suggesting formulæ for their preparation, and presented specimens of over thirty fluid extracts prepared according to his suggested formula.

For this essay a copy of "Pereira's Materia Medica" was voted to him by the Association, as a testimony of its appreciation of his services. This paper may justly be considered as forming the basis on which many fluid extracts were admitted into the Pharmacopœia.

In 1866, we have an essay "On Liquidambar Styraciflua and its

Balsamic Resin, showing the Principle Contained in the Resin to be Cinnamic Acid."

William Procter, Jr., became a member of the Philadelphia College of Pharmacy in 1840; in the succeeding year he was elected to the Board of Trustees, and held that position during his life. In 1846 he was elected to the chair of Theory and Practice of Pharmacy, a department which was, in fact, created largely through his instrumentality, and he became the first Professor of Pharmacy in the oldest college of pharmacy in America.

In 1855 he was made Corresponding Secretary of the College, and continued to serve as such for twelve years. In 1867 he was elected First Vice-President of the College. His interest in the affairs of the College continued unabated during the thirty years of his connection with it; so closely was he identified with its progress that its history during that period is almost a narrative of his life.

He served on all committees appointed for the decennial revision of the Pharmacopœia for thirty years, and his services were engaged in assisting Doctors Wood and Bache in several of the last editions of the United States Dispensatory.

In 1872 the Chair of Pharmacy became vacant by occasion of the death of Prof. Edward Parrish. The season for the opening of the course of lectures was so near at hand that the Trustees of the College turned their minds instinctively towards William Procter, Jr., as the man to relieve them from embarrassment. The Trustees were well aware that he had an earnest desire for retirement, and canvassed well the field for one who could, at so short a notice, take up the course on practical pharmacy. At the request of the Board of Trustees of the College, he consented to fill the chair, and delivered the course of lectures in the winter of 1872–73. It was known to his friends that the position was intended by him to be but temporary, and that he contemplated retiring at the close of the following session. The lectures for 1873–74 progressed as far as February 9th, and but a few more remained to finish up the work which he intended should terminate his professorship. On the evening of February 9th he delivered his usual lecture, and on returning home expressed great satisfaction at the attention which the class had given. At a late hour he retired in his apparent usual health; shortly after falling asleep, a disturbance in respiration aroused the attention of members of the family and, before medical assistance could be called, life had ceased.

Twenty-six years have elapsed since Professor Procter passed away. It is true that pharmacy has witnessed many changes in the last quarter of a century, but his work still remains. Methodical and careful in his habits, far-seeing in his vision, equipped by his experience in writing and teaching with the every-day needs of the pharmacist, no wonder need be expressed that time has made so few ravages, and very little of his work can be said now to be obsolete. He lived in what might well be termed the heyday of galenical pharmacy. He witnessed the birth of fluid extracts. Indeed, it is not too much to say that he was the chief nurse of these infants, and while others came after and assisted in the nurture of the children, he was ever faithful, and he lived long enough to see them grow to lusty manhood. If he were but permitted to see the development in this branch of the pharmaceutical art, what satisfaction and comfort it would be!

In 1849 there was issued from the press his American edition of Mohr and Redwood's Practical Pharmacy. This voluminous work was enriched by additions from his own pen. The work never went through a second edition, attributed in a great measure to the cost of proper illustration, which the publishers were not willing to incur, and without which the value of the work would have been lost.

In October, 1851, there was assembled in the city of New York a convention of pharmaceutists, in pursuance of a call made by the New York College of Pharmacy, for the purpose of considering the law relating to the inspection of drugs at the Custom House, and to fix upon some standard which would enable inspectors to act with uniformity and discernment. The Philadelphia College of Pharmacy was represented by Chas. Ellis, Wm. Procter, Jr., and Alfred B. Taylor. This gathering of men of note, called to discuss the customs law, was impressed with the advantages which would be derived by the pharmacists of the United States from a large association, national in character, where, by personal intercourse and exchange of experience, the practice of pharmacy throughout our widely extended country would be more harmonized, and the general standard of education elevated. It was therefore "resolved that a convention be called, consisting of three delegates from each incorporated and unincorporated pharmaceutical college or society, to meet in Philadelphia on the first Wednesday in October, 1852."

This convention assembled in the old College building, in Zane Street (now Filbert Street), and here was inaugurated the American Pharmaceutical Association, the President of the College, Daniel B. Smith, acting as its first presiding officer. From the time of its inception, William Procter, Jr., enlisted all his activity in promoting its welfare, and his name will be found in all its Proceedings down to the meeting in Richmond, Va., 1873. In 1852 he was a member of its first executive committee; in 1853 was chairman of a committee appointed to prepare an address to the pharmaceutists of the United States on the subject of pharmaceutical instruction.

In 1853 he was a member of the committee appointed to prepare a paper on the standard of quality for drugs, together with appropriate tests for detecting adulteration. This committee was continued until the year 1856.

In 1856 he was chairman of the first Committee on the Progress of Pharmacy, all previous reports on this subject having been made by him in his capacity of Corresponding Secretary. In the same year he was appointed chairman of a committee to report a syllabus of a course of study appropriate to students in pharmacy. This committee was continued until the year 1858, when he made the report published in the volume of the Proceedings of the Association of that year. He was Corresponding Secretary from 1852 to 1857, First Vice-President in 1859–60, and was elected President at the session of the Association which convened in Philadelphia in 1862. In 1866 he was appointed one of the delegates to represent the Association at the International Pharmaceutical Congress to assemble in Paris in the following year.

He was absent from the annual meetings of the Association but once (while in Europe), and contributed largely to the interest of its Proceedings by answers to queries which he had accepted, and by his volunteer papers.

The papers contributed by Professor Procter to the American Pharmaceutical Association are numerous, and marked by his usual carefulness and accuracy of investigation. Of these, his essay "On Ergot" (suggesting the use of acetic acid in its preparation), "On Aconite Root," "Atropia from American Belladonna," "On Extract of Cannabis Indica," "On Sassafras Officinale," may be mentioned as not included in the preceding review.

In the Proceedings of the Association for 1873 will be found several able papers from his pen. One, "On Suggestions to Begin-

ners in Pharmacy," should receive attention from all the class who purpose to follow in the path which he has trodden before them.

This sketch would be incomplete without some notice of Professor Procter's home life, and it can readily be surmised that a man with his character and happy disposition would be calculated to make home happy to those who are drawn within the circle of his immediate influence become strongly attached to his personality.

Professor Procter was married twice; first, in October, 1849, to Margaretta, daughter of Amos and Elizabeth Bullock. Two children blessed this union, Wallace, born in 1851, and Mary Goldsmith, in 1852. Wallace Procter followed in his father's footsteps, and now conducts a pharmacy in Philadelphia. He has been a Trustee of the College for a number of years, and is widely respected for his sterling worth, and has given a long service to the interests of the Philadelphia College of Pharmacy.

In 1864 Professor Procter married Catherine, daughter of Robert and Sally Parry. This honored and beloved woman is well known to many of the older members of this Association. She nearly always accompanied her distinguished husband to the meetings of the Association, and her bright face and gentle manners endeared her to all who enjoyed the pleasure of her acquaintance. It would have been a great satisfaction if she could have been here at this meeting. It is just twenty-seven years since Professor Procter attended the last meeting of the American Pharmaceutical Association, held in the city of Richmond in 1873. The loss of her dear husband was, of course, a sad blow to her. In conversation with her a few days ago, she enjoyed with much interest hearing from many of her old friends who still are members of this Association, and I am sure that every member will join in the wish that her future years may be filled with happiness.

In concluding this brief tribute to the memory of William Procter, a few extracts from a eulogy delivered at a meeting of her sorrowing colleagues, students and friends may not be inappropriate:

"How sad for us to think we shall never hear his voice again, that we were not permitted to be with him when he breathed his last, that we could not hear the final message from his lips as the dim future opened before him. No answering pressure of his hand, no parting token of his love; for so sudden was the summons that he stopped not at the river, his feet scarce touched the chill depths of the mysterious stream, when he was fairly over.

"It was not the quiet swinging of the pearl gates as they opened to admit one more among the countless throng, but a sudden flash, and wide open sprang those doors as his spirit passed through."

Yet, my colleagues, there was mercy in the hand which laid him low; no sharp death agony, no long and painful struggle, and no wasting fever racked his frame; a mere transition! a simple laying down of life and taking up a new.

How appropriate are the words of the famous Carlyle: "The man whom we love lies there, but gloriously worthy; and his spirit yet lives in us with authentic life. Could each here vow to do his little task as the departed did his great one—in the manner of a true man—not for a day, but for eternity; to live as he counseled, not commodiously in the Reputable, the Plausible, the Half; but resolutely in the Whole, the Good, and the True."

AN EXAMINATION OF ACACIA.

By Robert G. Shoults.

In endeavoring to devise some means whereby the presence of dextrin might be established when admixed with powdered acacia, the writer found that the behavior of gum arabic towards the usual reagents so nearly corresponded to the reactions of commercial dextrin that it seems next to impossible to distinguish them by qualitative tests alone. The United States Pharmacopœia ('90) asserts that acacia will not reduce alkaline cupric tartrate V. S. (Fehling's solution), but this is manifestly incorrect, as a study of the appended table will show.

The Pharmacopœia does not state how Fehling's solution is to be used, or, in other words, to what temperature the mixed solutions must be heated in this test.

It would seem that this point were of some importance, as the temperature obtained by the use of a water-bath is not ordinarily sufficient to produce the characteristic red precipitate which the writer has observed at somewhat higher temperatures.

A sample of the commercial powdered gum and also a sample powdered very finely by hand produced a slight reduction at water-bath temperature, but the supernatant solutions, after being filtered and boiled, yielded much heavier precipitates than in the first instance.

Schroeder noticed this peculiar action of the powdered gum, and he attributed it to drying preparatory to powdering. A. J. P., 97, 195

The experiments of the writer go to show that the process of powdering will produce this change in the nature of the gum without the application of artificial heat.

The several samples examined responded to the following glucose tests: the alkaline bismuth, the indigo-carmine, the picric acid and Molisch's thymol test.

The safranin and the phenyl-hydrazin tests were exceptions, as no reaction took place.

It might be of interest to state that the above is corroborated by the experiments of F. W. Haussmann, Ph.G, who found that acacia syrups reduced Fehling's solution and also gave other glucose reactions. (AMER. JOURN. PHARM., 98, 593.)

Following is a table of the treatments of the different samples and the behaviors which were noted.

Samples 1, 2 and 3 were unpowdered gums of different grades of commercial value.

Sample.	Treatment.	Result.
Nos. 1, 2 and 3 . .	Heated on a water-bath with Fehling's solution.	Gave no reduction.
" " . .	Dried at 60° C., afterwards treated as above.	" " "
" " . .	" " 105° C., " " " "	" " "
" " . .	" " 130° C., " " " "	" " "
" " . .	" " 130° C., " *boiled* with Fehling's solution.	" marked "
" " . .	No artificial heat used. *Boiled* with Fehling's solution.	" " "
" " . .	Heated on a water-bath with Fehling's solution, after treating with HCl.	" " "
" . .	Heated on a water-bath with Fehling's solution, after treating with KOH.	" " "
" " . .	Boiled with Fehling's solution, after treating with HCl.	" " "
" " . .	Boiled with Fehling's solution, after treating with KOH.	" " "
Powdered gum (commercial) .	Heated on a water-bath with Fehling's solution.	" slight "
Powdered gum (commercial) .	When filtered and *boiled*.	" further "
Powdered by hand	Heated on a water-bath with Fehling's solution.	" slight "
" "	When filtered and *boiled*.	" further "

Guichard, in examining the rotatory powers of the various acacias, found that they formed three series according to their specific rotatory powers, as follows: those of Galam and Australia, + 16; those of Arabic and Aden, + 32; while gum Ghatti had a rotatory power of + 64. He explained the difference by viewing the gums as mixtures of several dextro-rotatory and lævo-rotatory substances. (*Chem. and Drug.*, 93, 144.)

Taking this as a suggestion, the writer examined several samples, and according to the results obtained it would seem that this point were worthy of further investigation.

Appended will be found a table showing the behavior of the several solutions towards polarized light.

Sample.	Treatment.	
No. 1	Dextrogyrate.	°D. 18
" 1	After treatment with HCl, dextrogyrate.	°D. 34
" 1	" " " KOH, "	°D. 2
" 2	Previous to treatment, lævogyrate.	°D. 18
" 2	After treatment with HCl, optically inactive.	—
" 3	Previous to treatment, lævogyrate.	°D. 18
" 3	After treatment with HCl, optically inactive.	—
Powdered	Previous to treatment, lævogyrate.	°D. 8
"	After treatment with HCl, dextrogyrate.	°D. 38

Two samples of commercial dextrin were also examined optically. Sample No. 1 was very white and contained a large percentage of insoluble material, which proved to be starch.

On treating 10 grammes of this sample with sufficient water to make 100 c.c. and filtering, the filtrate was found to have a specific rotatory power of + 102. Sample No. 2 was decidedly yellow and dissolved readily in water. In treating it in the same manner as the foregoing sample it was found to have a specific rotatory power of + 138.

To sum up the results of these experiments, it would seem that qualitative tests alone are of very little value for detecting dextrin in powdered acacia. If dextrin is used for the purpose of adulterating powdered acacia, which I think is highly improbable, the supposition is that a very white sample would be used.

Now, a very white sample of dextrin is liable to contain a large percentage of unconverted starch, which would be insoluble in water, and it could be readily detected by iodine T.S.

A high specific rotatory power for the sample of material and the presence of unconverted starch, left upon treatment with water, would be indicative of the presence of dextrin in the sample of powdered acacia. On the other hand, a sample of dextrin free from insoluble and unconverted starch would be more or less yellow in color. A sample of powdered acacia containing such an admixture would be soluble in water, and while starch might be absent, the presence of dextrin or similar impurities could be inferred from the specific rotatory power, which would be very much higher than that of any pure acacia.

The amount of dextrin or similar impurities detected by the polariscope may be calculated in the following manner:

From the specific rotatory power of the sample examined subtract the specific rotatory power of the pure acacia (viz., 18), and divide the result obtained by the increase in the specific rotatory power made by 1 per cent. of dextrin.

Example.—A given sample of powdered acacia has a specific rotatory power of 126. What is the percentage of dextrin present as detected by the polariscope?

$$126 - 18 = 108;\ 108 \div 1{\cdot}8 = 60 \text{ per cent.}$$

The increase in specific rotatory power made by 1 per cent. of dextrin (viz., 1·8) is obtained in the following manner:

$$198 - 18 = 180;\ 180 \div 100 = 1{\cdot}8.$$

198 is the specific rotatory power of pure dextrin.

18 is the specific rotatory power of pure acacia.

RUSTING'S TRAGACANTH SCHEME FOR ALKALOIDAL ASSAY WORK.

By J. B. Nagelvoort.

In his second edition of "Assay of Drugs," Dr. Lyons speaks admiringly of F. A. Thompson's sawdust "wrinkle," a feature of assaying, appealing to the busy druggist by its simplicity, who wants, nevertheless, to verify the strength of his fluid extracts.

It has been urged for years, and is still true to-day, how disastrous it is to pharmaceutical progress if the druggist is intimidated with elaborated, costly or complicated apparatus. There is no necessity to dwell upon this theme. We all know it.

Thompson's sawdust process for Extr. fluida has the great drawback that the sawdust has to be prepared for it. This pays only if the article is wanted regularly.

Rusting, a young Dutch apothecary of much promise, the kind of man to apply his pharmaceutical experience to chemical manipulations (which in parenthesis promoted the spreading of chemistry in the days of apothecaries like Scheele, Serturner, Pelletier and Caventou, Trommsdorf, Geiger, Mohr, Merck, Flückiger; public benefactors, like J. C. Bemelot Moens, one who made two blades of grass grow where one used to grow only—in other words, who doubled the output of quinine sulphate, made quinine cheap by his scientific culture of Cinch. Succ. Ledg. on Java, where he was military apothecary at first and later director of the cinchona plantations, not to mention the living, of course), invented a similar scheme, even of wider application, which leaves, as one will see, all the others behind in expediency, cleanliness, cheapness, and is quantitatively very satisfactory. It deserves greatly to be propagated, and, since references are scarcely met in literature, it is offered here for a wider circulation. Only a very small variation is made in the original, which could be dispensed with, where it is applied to the only two Dutch fluid extracts, Ex. fld. Chinæ Succ. and China liquida, the previous one containing only 10 per cent. alcohol, the latter one none at all; but which will make the "Tragacanth" scheme of wider application for the many English and American fluid extracts, with their large percentage of alcohol.

For accurate, expedient and cheap assaying of "drugs," as we usually understand the word, Schwickerath's full report, in the *Pharm. Rundschau* for 1894, page 136, with his use of so-called petrol. ether, instead of ethyl ether, as recommended by Keller, later on, has yet its full value.

The Method.—Weigh in a porcelain or other small dish 3 grammes of the Extr. fluidum, add 5 c.c. of water and expel alcohol. Transfer, in the usual analytical way, into a medicine bottle of about 100 c.c. capacity, add 60 c.c. ethyl ether (pure ether), and make alkaline; add small quantities at a time of a 5 to 10 per cent.

solution of NaOH, verifying alkalinity by litmus paper and avoiding excess of it. Shake the contents of the well-corked bottle strongly for about a minute and add the 2 grammes powdered tragacanth. Shake again for another minute, give the small globules of tragacanth mucilage time to settle, decant off the clear fluid 40 c.c. = 2 grammes of the fluid extract, into an "Erlenmeyer" of known weight, distil ether, add the distilled ether to the common stock, dry the alkaloids, by about 50° C., in a current of air, supplied by a common rubber "spray" ball, to constant weight, which is obtained in about fifteen minutes' time. Multiply by 50, to obtain per cent., and the assay is finished.

Quinine tannate is assayed for its quinine by dividing 1·5 grammes with a little water to a homogeneous mixture, adding 75 c.c. ethyl ether, making carefully alkaline with the given solution of NaOH, shaking first without, and afterwards with 2 grammes powdered tragacanth, decanting 50 c.c. = 1 gramme quinine tannate, treating as above, placing the decimal at two points to the right, for the multiplication to percentage.

For solid narcotic extracts Rusting employed the chloroform-petroleum ether mixture, previously recommended by Schwickerath (*supra*), and titrated as commonly.

Extract Fluid Hydrastis is treated separately by the author. He takes 10 grammes, dilutes with 20 c.c. water, boils slowly in an Erlenmeyer of about 100 c.c. capacity, until a little less than 20 grammes remains, cools off, brings the weight to 20 grammes, shakes with some infusorial earth (kieselguhr), and filters. Ten grammes of the filtrate is transferred (weighed) into a medicine bottle of about 100 c.c. capacity, 25 c.c. pure ether added and later on 3 c.c. ammonia water of 10 per cent., shaken together. Twenty-five c.c. petroleum ether is now added, the whole agitated again; lastly 2 grammes pulverized tragacanth added, shaken anew, allowed to settle and 40 c.c. = 4 grammes fluid extract of the clear fluid taken. This is deprived of its ethyl ether by immersion of the flask containing the 40 c.c. and rotating into water of 30° to 35° C., for a few minutes; ethyl ether will evaporate off hereby; the flask is cooled down, when about two-thirds remains, is well corked, put aside for a few hours in a cool place in winter and into a freezing mixture in the summer time, and the hydrastine left to crystallize out. The supernatant fluid is decanted, the crystals dried and weighed as usual. Results × 25 = per cent.; quantitatively satisfactory.

RECENT LITERATURE RELATING TO PHARMACY.

PEUCEDANIN AND OREOSELONE.

E. Schmidt reports (*Archiv. d. Pharm.*, 1898, 662) the work of Jasso and Haensel on these substances, found in Peucedanum officinale, and the subjects of much investigation and of many conflicting reports. The investigators found the melting-point of the pure peucedanin (the commercial is notoriously impure) was 99° and of oreoselone was 175°–177°. Analysis showed the formula of peucedanin was $C_{15}H_{14}O_4$ (confirmed by molecular weight estimation), and of oreoselone was $C_{14}H_{12}O_4$. Peucedanin contains a methoxyl group, and, when saponified, oreoselone remains; hence the formulæ of the two may be written $C_{14}H_{11}O_3OCH_3$ and $C_{14}H_{11}O_3OH$, respectively. Both substances, on treatment with bromine, yield the same product—monobromoreoselone, and, likewise, both, on treatment with nitric acid, yield mono-nitroso-oreoselone.

Phenyl hydrazine reacts with oreoselone to form a hydrazone, proving presence of an aldehyde or ketone group. The indications point to a ketone rather than an aldehyde. With peucedanin, a similar reaction occurs, but the hydrazone has not yet been isolated. Acetyl chloride reacts with oreoselone, forming a monoacetyl derivative. It does not combine with peucedanin, confirming the theory that peucedanin is the methyl ether of the phenol, oreoselone. Several complications presented themselves in the investigation, notably the curious action of ammonia on nitroso-oreoselone, rendering it impossible at present to suggest a more graphic formula than that given above.

The article closes with a brief mention of oxy-peucedanin, a constituent of commercial peucedanin. This melts at 140°, and analyzes to the empiric formula $C_{20}H_{26}O_9$. H. V. A.

DIGITOXIN AND DIGITALIN.

H. Kiliani (*B. d. Deutsch. Chem. Ges.*, 1898, 2454) reports his continued investigations on the above constituents of digitalis.

He finds one molecule of digitoxin ($C_{34}H_{54}O_{11}$) hydrolyzes to one molecule of digitoxigenin ($C_{22}H_{34}O_4$) and two molecules of an interesting sugar—digitoxose ($C_6H_{12}O_4$). The composition of the sugar is proven by the derived oxime and the corresponding acid. He

thinks it a cyclic compound, and notes, as a striking reaction, the blue color produced when it is treated with glacial acetic acid, an iron salt and sulphuric acid. No other observed sugar gives this reaction.

Digitoxigenin forms, with concentrated hydrochloric acid, a characteristic anhydride, which, on oxidation with chromic acid, yields a ketone.

Digitalin ($C_{35}H_{56}O_{14}$) hydrolyzes to digitaligenin ($C_{22}H_{30}O_3$), digitalose ($C_7H_{14}O_5$) and dextrose. Discussing Adrian's statement (*Nouv. Rem.*, 1897, 78) that the French digitalin (Nativelle) is identical with digitoxin, the author finds that, while closely similar, they are not identical. H. V. A.

EDITORIAL.

THE U. S. PHARMACOPŒIAL CONVENTION.

In another part of this JOURNAL is given a concise account of the salient features of the Proceedings of the National Convention of 1900 for revising the United States Pharmacopœia. There are several features of the Convention which may be gleaned by reading between the lines of the account of the Proceedings which are worthy of mention, at least, at this time. One of these features is the universal appreciation of the services of those who have contributed to the success of the previous editions of the Pharmacopœia. The resolution of appreciation of the eminent services rendered to pharmacy and medicine by Dr. E. R. Squibb was only equalled by the intense pleasure of the members upon hearing the message read by the President that the crisis in the illness of Dr. Charles Rice was passed, and that he would continue as Chairman of the Committee of Revision. These were little things apparently, and yet who will doubt but that they were the greatest encomiums that could be given those whose labors have been characterized by unselfish devotion to the professions of medicine and pharmacy, and whose reward, in a measure, must consist in such expressions from representative bodies of this kind?

Another feature, notwithstanding the nearly uniform representation of the medical and pharmaceutical societies (fifty-seven to fifty-nine) as at the last revision (fifty-four to fifty-four), was the

marked disposition shown to give pharmacists, and particularly those who had served conspicuously in the work of the American Pharmaceutical Association, positions of honor and trust.

The officers of the Convention included five members who are active in the medical profession, and four who are closely allied in pharmaceutical work. All the members of the Board of Trustees are prominent retail pharmacists. The Committee of Revision is represented by six medical men and nineteen pharmacists or teachers in colleges or schools of pharmacy. This emphasizes several things: (1) That however the average pharmacist views the American Pharmaceutical Association, nevertheless the active members of this Association stand for the progress of the mutual work of the medical and pharmaceutical professions; (2) and furthermore that the pharmacists are not losing any ground, but rather growing in the respect of the physician. It must be said, however, that notwithstanding the balance of power in the hands of the pharmacist, there was every disposition shown to make the coming work one of value to the physician as well as to the apothecary.

A third feature, which must be gratifying to the professions, was the rather large distribution of good, sound common sense among the delegates. It did not depend upon any one man to see that the Convention was not imposed upon, or that the Committee of Revision be properly instructed. While it is true that the Convention of 1900 was almost solely guided by the recommendations of the Committee of Revision of 1890, nevertheless, any ill-advised action or one in which there was the least question of advisability was immediately and with little effort defeated. It was pleasing to note the alertness with which the members opposed everything which would detract in any sense from the value of the book which the societies and colleges which had sent them expected them to uphold. Surely, no man who attended the Convention returned home with any other thought than that, come what may, the honor of the Pharmacopœia is safe. Let the experimental or "scouting" party continue their researches. Let the experimenters in pure science bring the fruits of their labors and researches. Let come what may to this or any future Convention or Revision Committee we can expect that good sense and judgment will rule. It now remains for each and all to help the Committee of Revision to make the next Pharmacopœia one in character fitting the first revision of the twentieth century.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

COMMERCIAL ORGANIC ANALYSIS. By Alfred H. Allen. Third Edition. Vol. II, Part II. Hydrocarbons, Petroleum and Coal-tar Products, Asphalts, etc. Revised by Henry Leffmann, M.D. Philadelphia: P. Blakiston's Son & Co. 1900.

Part I of the new edition of Vol. II of Allen's Commercial Organic Analysis, which was noticed in this JOURNAL, 1899, p. 438, covered the fixed oils and fats. This part covers the hydrocarbons and other products from petroleum and coal-tar, and a third part remains to be issued on the essential oils and resins.

The present volume contains much of the greatest interest and value to the chemist and pharmacist. Thus we find both acetylene and calcium carbide treated from the standpoint of our most recent knowledge, with directions for their analysis. Very notable space has been given to asphalts, both European and American; and the best methods for their analysis discussed; the composition of tar from gas retort, shale distillation, coke oven and blast furnace fully discussed and means given for the differentiation of these.

Under phenols we have the newer disinfecting liquids noted, such as creolin, lysol, saprol, solutol and salveol, and their composition stated.

Under the head of creosote we have the creosotes from different sources compared and means of recognizing adulteration in the more valuable given.

Numerous tabular views of the composition of petroleum, coal-tar and other mixtures are given, and schemes for the analysis of such mixtures.

The book is thoroughly up-to-date in its presentation of the chemistry of this important class of compounds, and can be recommended in the strongest terms as to its value to all working in this field.

S. P. S.

NATIONAL CONVENTION OF 1900 FOR REVISING THE U. S. PHARMACOPŒIA.

The Eighth Decennial Convention for Revising the United States Pharmacopœia was held in the banquet hall of the Raleigh Hotel, in Washington, D. C., from May 2-4, 1900.

The delegation was a representative one from every part of the Union. Twenty-eight States were represented by delegates from their various pharma-

ceutical and medical societies, and the following national organizations and governmental bodies also sent accredited delegates, viz.: The American Medical Association; the American Pharmaceutical Association, the U. S. Army Medical Department; the U. S. Navy, Bureau of Medicine and Surgery; the U. S. Treasury Department, Marine Hospital Service.

There were fifty-seven medical departments of universities and medical societies and schools represented, as follows: California Academy of Medicine; California State Medical Society; California University; Colorado State Medical Society; Connecticut State University; Columbian University; Georgetown University; Howard University; Medical Society of District of Columbia; National University; Atlanta College of Physicians and Surgeons; Northwestern University (Medical School and Woman's Medical School); Chicago Rush Medical College; Chicago Medical Society; Indiana State Medical Society; Iowa State University; Kentucky State Medical Society; Bowdoin College; Maine Medical Association; Maryland Medical and Chirurgical Faculty; Baltimore Medical College; Johns Hopkins University; College of Physicians and Surgeons of Baltimore; Massachusetts College of Physicians and Surgeons; Michigan University; Detroit College of Medicine; Minnesota University; Hamline University College of Physicians and Surgeons; Missouri Medical Association; St. Louis Medical Society; Washington University (Missouri); New Jersey Medical Society; New York State Medical Society; New York State Medical Association; Albany Medical College; Long Island College Hospital; Brooklyn Medical Society; Medical Society of King's County, N. Y.; Buffalo University; New York Academy of Medicine; Cornell University; New York Post-Graduate Medical School and Hospital; New York County Medical Association; Cincinnati University; Philadelphia County Medical Society; Pennsylvania College of Physicians; Jefferson Medical College; Medico-Chirurgical College, Philadelphia; University of Pennsylvania; Pennsylvania Woman's Medical College; Western Pennsylvania Medical College; South Carolina Medical Association; Medical College of the State of South Carolina; Vanderbilt University; University of Virginia College of Medicine; Wisconsin State Medical Society.

There were fifty-nine pharmaceutical societies, schools and colleges of pharmacy represented, as follows: Arkansas Association of Pharmacists; California College of Pharmacy; Connecticut Pharmaceutical Association; Delaware Pharmaceutical Association; Howard University; National College of Pharmacy; Georgia State Pharmaceutical Association; Atlanta College of Pharmacy; Illinois Pharmaceutical Association; Northwestern University; Chicago College of Pharmacy; Northern Indiana School of Pharmacy; Indiana Pharmaceutical Association; Purdue University; Iowa Pharmaceutical Association; Kansas Pharmaceutical Association; Kansas University; Kentucky Pharmaceutical Association; Louisville College of Pharmacy; Maryland College of Pharmacy; Maryland Pharmaceutical Association; Massachusetts College of Pharmacy; Massachusetts State Pharmaceutical Association; Michigan State Pharmaceutical Association; Michigan University; Detroit College of Medicine (Pharmaceutical Department); Minnesota State Pharmaceutical Association; Minnesota University; Missouri Pharmaceutical Association; Kansas City College of Pharmacy and Natural Science (Missouri); St. Louis College of Pharmacy; New Jersey College of Pharmacy; New Jersey Pharmaceutical

Association ; New York State Pharmaceutical Association ; Albany College of Pharmacy ; Brooklyn College of Pharmacy ; King's County Pharmaceutical Society ; Buffalo College of Pharmacy ; New York College of Pharmacy ; German Apothecaries of City of New York ; North Carolina Pharmaceutical Association ; Ohio State Pharmaceutical Association ; Ohio State University ; Northern Ohio Druggists Association ; Cincinnati College of Pharmacy ; Cleveland School of Pharmacy ; Scio College ; Pennsylvania Pharmaceutical Association ; Philadelphia College of Pharmacy ; Alumni Association of P.C.P. ; Pittsburg College of Pharmacy ; South Carolina Pharmaceutical Association ; Medical College of State of South Carolina (Department of Pharmacy) ; South Dakota Pharmaceutical Association ; Tennessee State Druggists' Association ; Vanderbilt University ; Virginia Pharmaceutical Association ; Wisconsin Pharmaceutical Association ; Wisconsin University.

It is very interesting to note the uniform representation of the medical and pharmaceutical professions, and the disposition to make the coming Pharmacopœia practicable and useful to both physician and apothecary. The Convention was called to order promptly at 12 o'clock, on May 2, 1900, by the President, Dr. H. C. Wood, who then introduced Hon. John B. Wight, Commissioner of the District of Columbia, who welcomed the delegates in a fitting address to the Capital of the United States. After the reading of the official call by W. S. Thompson, President Wood delivered his address, which we publish nearly in full.

PRESIDENT'S ADDRESS.

By H. C. Wood.

"In the thought of the Infinite, it may well be that event follows event in unbroken sequence, from infinity to infinity, but man, bound to time by the limitations of his own existence, for his own purposes arbitrarily breaks the monotony of progress, and calls the larger fragments years, decades, centuries. To-day the tally of the decades is full, and assembled here together we stand upon one of those great mounds which mark the passage of a century. Looking forward, as a traveller who has reached some high dividing summit, we strive to peer into the future, but its mists are impenetrable, and what seem to our straining vision the outlines of figures are but the projected shadows of the present. The view behind is plainer ; the roads by which we have reached the summit are crowded with footsteps, in the nearby sharp and distinct, and fading with the distance. Under such circumstances, it is but natural that the opening address of your President should take a historic tinge, and that before we settle down to work we should try to draw from the past such lessons for the present as shall make secure the future. Such retrospect is especially fitting, since our labors, when they shall be carried to their end, will finish the first century of Pharmacopœia work in the United States.

"It is true that, as told in the historical introduction to the Pharmacopœia, there was published in Philadelphia, in 1778, for military purposes, a small Pharmacopœia, but it was the Counsellors of the Massachusetts Medical Society, who, in 1805, first appreciated the need in America of a general Pharmacopœia, and it was the result of their labors, issued in 1808, that suggested to Dr. Lyman Spalding, of New York City, the formation of the National Standard.

"The dry bones of history, such as may be found in the opening pages of the U. S. Pharmacopœia, interest most of us but little, but when they are clothed with flesh and blood, it quickens heartbeats to see how near akin the men of the past were to the men of the present; and how, notwithstanding all change, the continuing brotherhood of the race reveals itself in the written lines. * * *

"Very far from the truth is Tennyson's antithesis between the permanence of the brook and the momentary life of humanity; the fact is that the stream of mankind flows on forever as much as does the current of the brook; only as the drops of water in the brook change moment by moment, so do the drops come and go in the great human stream; and almost as like as drops are to drops so is man to man. Hands from which had scarcely fallen the gauntlets of Puritanism wrote in primal New England: 'It must not be understood that in adopting the modern language of botany and chemistry we have consulted the whims of every pretender. In this as in former ages men are creating confusion by creating names.' Wise words are these, which the coming sub-committee on nomenclature of the U. S. Pharmacopœia should ponder a little more seriously than have their immediate predecessors. 'In this as in preceding ages men are creating confusion by creating names.' Applicable is this to all sciences, but most applicable is it in the purely natural history studies, so-called, such as zoology and botany. Smith, or Jones, or Thomson, or Cope, written at the end of the name of an animal or plant fails not in its influence on human personality. I well remember with what glee and pride in the days of my callow youth, when I should have been under taskmasters learning methods and facts, I first saw H. C. Wood written after the name of a piece of fossil drift-wood from the coal fields of Pennsylvania. The boy is the father of the man. Unconsciously there remains in each of us some capacity of enjoyment such as was in the boy who, pointing to his name in the newspaper, said to his old aunt, 'That's me.' If the personal element could be withdrawn from the specific nomenclature of animals and plants there probably would be much simplification. Let it be said of none of us that we have created confusion by creating names. Why must the poisoned American perish while we are searching our memories for ferri oxidum hydratum cum magnesia when antidotum arsenica might have saved his life, if only he had lived in Germany.

"In the preface of the Pharmacopœia of 1808 it is interesting to find the germs whose subsequent growth has cost the members of this Convention and its committee so much labor. In accordance with the statement in the preface, 'As there frequently arise errors of no small importance from the promiscuous use of weights and measures, it is proper that the quantities of substances, whether fluid or solid, be determined by weight.' In accordance with this the framers of the first American Pharmacopœia adopted the system of parts by weight, but, unfortunately, they went on to say:

"'Yet it may suffice to measure wine, water and aqueous liquids in some instances, provided that for this purpose vessels be employed, of glass where the nature of the substance requires it, whose capacities and divisions accurately correspond with the divisions or multiples of the modern pound.' And so saying our fathers sowed the tares which grew up with the wheat, and choked out the true grain until only by the labor of many years were they uprooted and the system of parts by weight in its purity reinstated in the U. S.

Pharmacopœia. The tares grew rapidly, for in the second edition of the Pharmacopœia, that of 1820, fluid measures were employed. The sin of the men of 1820 in changing from parts by weight to liquid measures of quantity was made greater by the fact that the liquid measures were not at that time in use among the apothecaries of America. That the amblyopia of the Revisers was not deeper than that of their contemporaries is, however, shown by the following extract from a contemporary review of the National Pharmacopœia in July, 1821: 'If the American Pharmacopœia be adopted throughout the United States, as no doubt it will be, these modes of indicating quantities must necessarily come into use, and that they will be continued after having been once introduced we do not hesitate to affirm, because they are more *definite and precise and consequently safer* than the old methods. In such case it will be necessary that the apothecaries be provided with the measures above mentioned.'

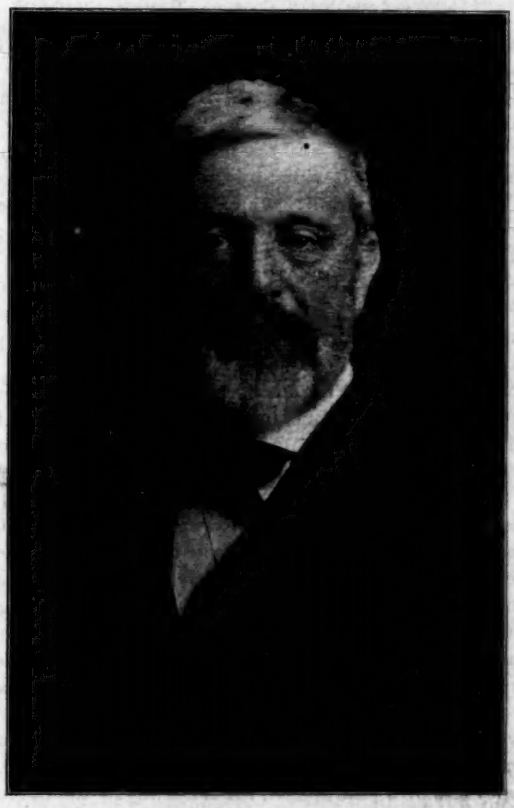
"The language of the Massachusetts Pharmacopœia of 1808 was English. The first United States Pharmacopœia of 1820 was printed in Latin, with a translation of the Latin into English upon the opposite page; and the Convention of 1830, as not departing from the use of Latin, justified itself in the language of the preface because 'the Latin, if not essentially necessary, may prove highly serviceable by fixing the precise meaning of an English phrase which might not otherwise be well understood.' Fancy an American apothecary or an American doctor of the present time, when he could not understand the exact meaning of the English, turning to the Latin to clarify his thoughts.

"The Pharmacopœias of 1820 and 1830 were prepared by the conventions themselves, these conventions being composed solely of physicians. In 1840 the growth in numbers of the convention necessitated the reference of the detailed work of revision to a committee, and the method still in vogue was inaugurated. The same convention made itself further historic by determining that the convention to be called in 1850 should be composed of the two professions of Medicine and of Pharmacy, by whose co-union in labor the continuance of the Pharmacopœia of the United States as an authority has been made possible.

"Since 1840 the great part of the labor of revision of the Pharmacopœia has fallen upon the successive Chairmen of the Committee of Revision. In sixty years of these labors there have been only four chairmen, namely, George B. Wood, from 1840 to 1860; Franklin Bache, from 1860 to 1870; Joseph Carson, from 1870 to 1880; Charles Rice, from 1880 to 1900. As no revision of the Pharmacopœia has been more successful than the last, and as at no time have the necessary duties of the chairman of the committee been as great as they are at present, so never in the century has there been found a man more laborious, more conscientious and painstaking, or better fitted by extraordinary acquirements and personal qualities to fulfil the onerous duties of the position than the present chairman; and your President most earnestly hopes that by his continuance in office the success of the next revision of the Pharmacopœia may be ensured.

"During its whole life the United States Pharmacopœia has received no governmental support, and has been free from governmental control. Under the circumstances the influence which it has exerted upon the pharmaceutical and medical professions, the voluntary obedience which has been given to it,

are not only a tribute to its practical excellence, but also a strong evidence of that peculiar Anglo-Saxon power of recognizing authority that is not upon the statute books, a power born of self-control and common sense, which makes the race, of all others, most capable of self-government. The indirect recognition by the Government of the Pharmacopœia becomes each year more apparent both in Federal and State legislation, so that there does not seem at present any danger of the Pharmacopœia losing its control in the United States.



HORATIO C. WOOD, M.D.[1]

"The Pharmacopœias which have been produced in the United States by voluntary effort, both in the past and in the present, contrast favorably with the governmental standards of European countries. In its scientific accuracy, in its general usefulness, and in the efficiency and elegance of its resulting preparations, our Pharmacopœia is the peer of the best.

[1]A sketch of Dr. Wood's life is found in Johnson's Universal Cyclopædia and in the *Therapeutic Gazette*, the last volume before the present series.

"I am not one of those who are conceited in things American, freely acknowledging that we have added very little to the great sciences which underlie the practice of medicine, and that we have been indebted to Europe for almost all of our fundamental inspirations, I still hold most strongly, however, to the belief that there are no therapeutics superior to the American therapeutics, and that in no other country has pharmacy been carried to the perfection that it has reached in the United States.

"Delegates of the pharmaceutical associations, I congratulate you on representing a profession which has attained its highest development in the United States.

"There is a probably widespread, and certainly often spoken of, feeling that the medical profession of the United States does not properly appreciate and support the United States Pharmacopœia. There is some foundation for this feeling, but assuredly it is exaggerated. It is true that, owing to the activity of manufacturing pharmacists, and the number and skill of their commercial salesmen (vendors of samples), aided by the deficiencies of medical education and the peculiar childlike credulity which is so common in doctors, all kinds of proprietary mixtures and proprietary articles and extra-pharmacopœial remedies are largely used in the United States. It is so easy for the lazy doctor to write for Smith's Panacea for human ills, and so easy for the doctor who knows neither materia medica nor therapeutics to order Jones' Consumption Cure or Thomas' Kamianita, that so long as laziness and incompetence remain with us so long will this thing be done. But this is no fault of the Pharmacopœia, and no perfection of the Pharmacopœia will greatly influence it. Certainly any attempt to reduce the products of the Pharmacopœia to the level of the proprietary or patent medicine would be to destroy the dignity of the work, to bring it into contempt, and finally to uproot its influence. Under the influence of State law and of public opinion the average education of the American medical profession is rapidly and steadily rising; in this and not in anything that this Convention or its committee can do lies the hope of the future. Moreover, the intensity of the feeling that the American medical profession is not so thoroughly interested in the Pharmacopœia as it ought to be rests largely upon a misconception of the intent of the Pharmacopœia and its relations to the medical profession. A Pharmacopœia is not intended to be a guide to practice, or a working book to be used by the doctor, but is really a handbook of the apothecary. I do not believe that at any time or in any country Pharmacopœias ever have had much sale among the medical profession; and each year, as the professions differentiate themselves more and more, as the doctor becomes less and less of a pharmacist, the tendency of the doctors to buy Pharmacopœias must grow less rather than more. The Pharmacopœia can only be popularized in the medical profession by making it a treatise on therapeutics; in other words, by causing it to cease to be a Pharmacopœia. So long as it is a Pharmacopœia it is the basis upon which text-books and dispensatories are to be written; and it becomes through these treatises a guide to the medical profession. It remains the apothecary's *vade mecum*, with which in hand he does his work, and its sales must be chiefly among the apothecaries.

"There may have been a time when the medical horizon was so narrow that the doctor had time to trouble himself as to how the druggist made laudanum, but at present the doctor has as much as he can do to store his mind with purely

medical facts; he wants simply to know what laudanum does when he puts it into the patient, and he trusts the apothecary to give him laudanum when he calls for it.

"Be these things as they may, it is certain that the present condition of the United States Pharmacopœia is one of great prosperity. The book itself ranks with the best of its predecessors or of foreign Pharmacopœias, representing all that was possible in 1890. Its hold upon the people of the United States is more firm than it ever was before. Its sales have far exceeded those of any previous edition, and for the first time in the history of this Association the treasury is overflowing. Indeed, so rich have we become that the greatest danger which threatens the Association is, to my thinking, surplus of revenue. * * *

"Finally, gentlemen of this Convention, a word and I have finished. As the American nation of 1800 seems to us to have been but a handful of seed of whose growth we are the fruit, so will those who shall meet here in the year 2000 think of the American people of to-day as a small body from which they have themselves sprung. We live but for the moment; 100 years from now the greatest of us will remain only as fading memories—as men whose records have been so overwritten on the palimpsest of time that only here and there can a sentence be deciphered. So it ever has been and so it ever shall be with the human race; men come and go and are not; but though the worker disappears and is forgotten the work lives on. Our fathers labored and we have entered into their labors. Let us see to it that, preserving in its essential lines that which has come to us, and adding to it in our day and generation as strength is given us, we may leave for the coming century good work and true, which shall remain as the abiding though unrecognized witness of our earnest living."

The President's address also contained a number of recommendations which were subsequently reported upon by a committee consisting of H. M. Whelpley, Joseph P. Remington, S. A. D. Sheppard and J. C. Cleeman. The following is the report which was adopted by the Convention:

"(1) Your committee report that the recommendation to hereafter divide the work of the Committee on Revision and Publication be approved.

"(2) The proposition that the new Committee on Revision consist of twenty members is not approved.

"Your committee believes that in view of the greatly increased demands of the country the number of this committee should be retained at twenty-five.

"(3) The suggestion that the business affairs of this convention during the interim be delegated to a board of five members, together with two officers mentioned, received favorable recommendation.

"(4) We recommend the incorporation of this body and the adoption of the constitution and by-laws at this convention.

"(5) We recommend that the retiring members of the Seventh Revision Committee each receive an honorarium equivalent to $25 per year for ten years; the same amount to be tendered to the heirs of deceased members. This cannot be regarded as compensation to the committee, but as a testimony for faithful services performed."

OFFICERS OF THE PHARMACOPŒIAL CONVENTION OF 1900.

On Wednesday afternoon the Committee on Nominations was formed. The committee was made up of one delegate from each of the organizations repre-

sented, and devoted the entire evening to their work of making nominations for (1) Officers of the Convention; (2) The Committee on Revision; (3) The newly-created Board of Trustees.

On Thursday morning the report of the Nominating Committee was read by F. G. Ryan, and the nominees were duly elected by a vote cast by the Secretary. The following is the list of officers of the Pharmacopœial Convention of 1900:

OFFICERS OF THE CONVENTION.—President, Horatio C. Wood, of Philadelphia; Vice-Presidents, A. B. Prescott, of Ann Arbor, Mich.; O. A. Wall, of St. Louis; R. W. Wilcox, of New York; N. S. Davis, Jr., of Chicago, and A. L. Lengfeld, of San Francisco; Secretary, H. M. Whelpley, of St. Louis; Assistant Secretary, W. G. Motter, District of Columbia; Treasurer, William Mew, of Washington, D. C.

COMMITTEE OF REVISION.—Charles Rice, New York; E. H. Squibb, Brooklyn; J. P. Remington, Philadelphia; Charles Caspari, Baltimore; W. G. Gregory, Buffalo; N. S. Davis, Jr., Chicago; James M. Good, St. Louis; George F. Payne, Atlanta; Edward Kremers, Madison, Wis.; S. P. Sadtler, Philadelphia; Henry Kraemer, Philadelphia; H. A. Hare, Philadelphia; L. E. Sayer, Lawrence, Kan.; A. B. Stevens, Ann Arbor; A. B. Lyons, Detroit; C. Lewis Diehl, Louisville; Oscar Oldberg, Chicago; John Marshall, Philadelphia; W. S. Haines, Chicago; J. J. Abel, New York; Virgil Coblentz, New York; W. B. Scoville, Boston; C. S. N. Hallberg, Chicago; A. R. L. Dohme, Baltimore; R. W. Wilcox, New York, and the President of the Convention, *ex-officio*.

BOARD OF TRUSTEES.—A. E. Ebert, Chicago; S. A. D. Sheppard, Boston; William S. Thompson, Washington, D. C.; Charles E. Dohme, Baltimore; George W. Sloan, Indianapolis.

GENERAL PRINCIPLES TO BE FOLLOWED IN REVISING THE PHARMACOPŒIA.

In accordance with the instructions of the Convention of 1890, Joseph P. Remington presented, on behalf of the Committee of Revision, created by that body, a draft of a plan for revising the Pharmacopœia of 1900. This, with some slight modifications, was finally adopted, as herewith presented:

1. SCOPE OF THE PHARMACOPŒIA.

The Committee of Revision is authorized to admit into the Pharmacopœia any product of nature of known origin; also any synthetized product of definite composition which is in common use by the medical profession, the identity, purity or strength of which can be determined. No compound or mixture shall be introduced if the composition or mode of manufacture thereof be kept secret, or if it be controlled by unlimited proprietary or patent rights.

2. DOSES.

After each pharmacopœial article (drug, chemical or preparation) which is used or likely to be used internally or hypodermically, the committee is instructed to state the average approximate (but neither a minimum nor a maximum) dose for adults, and, where deemed advisable, also for children, in the metric system, with the approximate equivalent in apothecaries' weights and measures. It is to be distinctly understood that neither this Convention nor the Committee of Revision created by it intends to have these doses regarded

as obligatory on the physician or as forbidding him to exceed them whenever in his judgment this seems advisable. The committee is directed to make a distinct declaration to this effect in some prominent place in the new Pharmacopœia.

3. NOMENCLATURE.

It is recommended that changes in the titles of articles at present official be made only for the purpose of insuring greater accuracy or safety in dispensing. In the case of newly admitted articles, it is recommended that such titles be chosen as are in harmony with general usage and convenient for prescribing; but in the case of chemicals of a definite composition a scientific name should be given at least as a synonym. It is further recommended that every common name and English title of articles used in the present United States Pharmacopœia, whose synonyms, both for the medicinal and commercial drug, be either described or modified so as to leave no doubt as to what is wanted.

4. ASSAY PROCESSES.

The committee is instructed to append assay processes to as many of the potent drugs and preparations made therefrom as may be found possible, provided that the processes of assay are reasonably simple (both as to methods and apparatus required) and lead to fairly uniform results in different hands. As regards the products of such assays, tests of identity and purity should be added wherever feasible. Physiological tests for determining strength should not be introduced by the committee.

5. PURITY AND STRENGTH OF PHARMACOPŒIAL ARTICLES.

The committee is instructed to revise as carefully as possible the limits of purity and strength of the pharmacopœial chemicals and preparations for which limiting tests are given. While no concession should be made towards a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles. In the case of natural products the limits of admissible impurities should be placed high enough to exclude any that would not be accepted by other countries.

Regarding the strength of diluted acids, tinctures, and galenical preparations in general, it is recommended that the committee keep in view the desirability of at least a gradual approach upon mutual concessions towards uniformity with similar preparations of other pharmacopœias, particularly in the case of potent remedies which are in general use among civilized nations. It is recommended that every article in the United States Pharmacopœia that has no medicinal value, and is used solely for mechanical and technical purposes, be discarded from the next Pharmacopœia.

6. GENERAL FORMULÆ.

It is recommended that general formulæ be introduced, as far as the particular nature of the several drugs will permit, for fluid extracts, tinctures, and such other preparations as are made by identical processes, and that the general formula to be followed in each case be merely indicated by reference.

7. WEIGHTS AND MEASURES.

The committee is instructed to retain the metric system of weights and measures adopted in the Seventh Decennial Revision.

8. SUPPLEMENT.

It is recommended that the Committee on Revision of the United States Pharmacopœia be directed to issue a supplement to the Pharmacopœia, if they deem such action desirable.

9. PRECEDENTS.

In all matters not specially provided for in these "General Principles" the rules established for previous revision, if there are any, should be followed.

In the course of the discussion in adopting the general principles to be followed by the new Committee of Revision of the U.S.P., a number of things were favorably considered by the Committee, whilst others were objected to. Among the former, which are not already included in the foregoing draft of general principles, was a motion by H. H. Rusby to incorporate among the vegetable drugs such descriptions of the powders as in these cases may be considered desirable by the Committee on Revision. Some of the things voted down by the Convention were: (1) The introduction of serums into the U.S.P.; (2) The substitution of English words wherever possible for foreign botanical terms. The American Chemical Society sent a communication requesting the co-operation of the Convention in the efforts of the various scientific bodies to secure the establishment of a National Standardizing Bureau. This was referred to a committee, and S. P. Sadtler reported at the last meeting that Congress had acted favorably upon the measure since the appointment of the committee, and moved that resolutions commending the action of Congress be passed, which was done. The recommendation of the Medical Society of the State of New York that a Bureau of Materia Medica be instituted, in order to carry on disinterested investigation into the character and value of new drugs, was referred to the Committee of Revision.

STATEMENT OF REVISION COMMITTEE.

Owing to the absence of Charles Rice, the Chairman of the Committee of Revision of the U.S. P., Joseph P. Remington asked that the committee of 1890 be permitted to continue its existence as long as necessary to bring its work into final shape, and presented the following statement:

"GENTLEMEN:—It becomes my duty, as Vice-Chairman of the Committee of Revision, in the absence of the chairman, in accordance with a resolution passed by the Committee of Revision, to make to the Convention a statement which will convey information which may be valuable in the absence of the report of the Chairman, Charles Rice, Ph.D., who is most unfortunately prevented from attending this meeting on account of serious illness. This statement must not be regarded as in any way a substitute for the chairman's general report; for the committee sincerely trusts that this will be compiled and go on the records when he shall have sufficiently recovered his health to perform this duty.

"It will be remembered that in the Convention of 1890 authority was given the Committee of Revision to publish the work at its own expense, making contracts for printing, binding and publishing and transacting all of the business connected with the publishing of the work. That this was a wise proceeding on the part of the Convention may be inferred from the fact that the book has received general commendation from all sources; that a larger number have been sold than of any previous revision; that a somewhat larger work

than the previous Pharmacopœia was issued; that the paper, binding and press-work were better and the book furnished to the public at the price of $2.50 against the price of $4.00 for the previous Pharmacopœia.

"In addition to this, the committee has a balance, as shown by the Treasurer's report and a certified statement from the trust company in which the funds are deposited, of $11,861.70. There are still some small bills unpaid, and some receipts yet in possession of the committee, which will leave a net balance in the hands of the committee of about $12,000. A considerable sum has been expended by the committee for research work, and the results of these researches are available for the next revision of the work and they will greatly facilitate the work of the next committee. This action of the committee will greatly forward the work of the next committee, and we trust that it will enable the latter to issue a more perfect revision in less time than was consumed in preparing the seventh revision.

"The greater part of the labor of revision was accomplished by means of correspondence, hectographed circulars being used as the means of communication and for voting purposes. This method entailed on the chairman of the committee an immense amount of labor, and the medical and pharmaceutical professions owe a debt of gratitude to our chairman for the masterly manner in which he performed his arduous duties. An expert was employed to collect from all sources detailed criticisms of the work and from these digests were prepared and distributed, which will undoubtedly be of great service to the next Committee of Revision, by furnishing readily accessible data for the improvement of such preparations as have been justly criticised. The authority vested in the committee by the last Convention to employ and pay experts, when necessary, was utilized, it being the sense of the committee that no effort should be spared to make the seventh revision as perfect as possible, and if special knowledge could be secured from any source which would add to the accuracy or completeness of the work, it should be obtained and freely utilized.

"It will be remembered that at the last Convention in 1890, one of the burning questions, and one which caused possibly the greatest amount of discussion, was the introduction of assay processes to be appended to the descriptions of the more energetic or otherwise improved drugs containing active principles, provided the therapeutic value of the drug depends upon the amount of these principles, and provided also that these principles can be assayed and identified with reasonable accuracy and without requiring complicated processes. The working out of this problem probably caused the committee as much labor and consumed relatively more time than any other special work, and while much remains to be done in this department of the work, it may be safely said that progress is being made, and this Convention will be asked to give the next Committee of Revision similar authority, in order that additional assay processes, which are reliable, may be introduced into the next revision. According to the instructions of the Convention for the seventh revision, no substance which cannot be produced otherwise than under a patented process, or which is protected by proprietary rights, shall be introduced into the Pharmacopœia.

"Probably no instruction of the Convention has caused more criticism than this; but it must be remembered that synthetic proprietary remedies were comparatively in their infancy in 1890. But, as is well known, the materia medica has been enriched or cursed with an enormous flood of preparations of this

character, and it will doubtless be necessary for the next committee to make a wise selection of synthetic remedies and introduce them into the next revision.

"Other interesting subjects connected with the seventh revision will be presented to this Convention through the report of the Committee of Revision on General Principles, and it will not be necessary to enlarge further upon the special subjects connected with the revision of the Pharmacopœia. But there are some facts connected with the publication and sale of the book which should be mentioned.

"When the manuscript copy of the seventh revision was nearly ready for the printer's hands, bids were solicited from various publishing houses for the composition, printing and binding of the book, and also for putting it upon the market. When the bids were opened, it was found that it would be more advantageous to give the contract for making the book to one publishing house and to put the sale of the work in the hands of a distributing book concern. This plan has proved most satisfactory; a system of checks was devised whereby the committee could at any time ascertain exactly how the work of manufacture and sale was progressing. The J. B. Lippincott Company, of Philadelphia, manufactured the book and P. Blakiston's Son & Co. became the agents for the sale.

"On November 25, 1899, a very destructive fire occurred at J. B. Lippincott Company. The stereotyped plates of the work were deposited in the fire-proof vaults of this establishment. The Sub-committee on Finance deemed it a wise business transaction to specially insure these plates against loss by fire, and for a comparatively trifling sum the insurance was effected. Notwithstanding the fact that nearly all of the plates in the fire-proof vaults were entirely protected when the fire came, it happened through a strange accident that the plates of the Pharmacopœia were entirely destroyed. It may not be out of place to explain how this occurred.

"An overzealous fireman, believing that he could stay the destructive action of the flames by forcing a stream of water on the debris after the walls had fallen, drilled a hole with considerable labor through a brick wall, imagining that he could insert a branch pipe, and thus be of great assistance. He unfortunately broke a hole into the fire-proof vault containing the Pharmacopœia plates. The flames soon drove him away, and sufficient heat entered the vault to melt the plates almost solidly together. As soon as these facts were determined, the sub-committee made application to the insurance company, proved the loss, and after considerable negotiations succeeded in obtaining the entire amount of the insurance money.

"The selling agents, by good business management, were enabled to fill all orders for the book without delay; a contract was executed for reproducing the plates and the book has been continually supplied without loss and is now being sold as usual. The action of the sub-committee saved in this case the sum of $1,500.

"This statement would be incomplete if reference were not made to the deaths of seven members of the Committee of Revision during the last ten years, as follows: Prof. P. Wendover Bedford, of New York; Prof. Charles O. Curtman, of St. Louis; Dr. John Godfrey, of New York; Dr. John M. Maisch, of Philadelphia; Prof. George F. H. Markoe, of Boston; Alfred B. Taylor, of Philadelphia; Dr. Thomas F. Wood, of Wilmington, N. C.

"The mention of these names will revive recollections of these noble men who passed away in the discharge of their duty. And the absence at this meeting of our devoted chairman will permit the recording at this time of the committee's great appreciation of the scholarly attainments of Dr. Charles Rice, and this slight tribute to his signal ability in carrying the seventh revision of the Pharmacopœia of the United States of America to a most successful conclusion."

REORGANIZATION OF THE CONVENTION.

A distinct feature of the work of the Convention was the adoption of a new Constitution and By-Laws, and the entire reorganization of its work. As now constituted the organization is known as the United States Pharmacopœial Convention. Its object is the revision and publication of the Pharmacopœia of the United States of America.

The Convention shall consist of delegates elected by the following organizations: Incorporated Medical Colleges and Medical Schools connected with incorporated Colleges and Universities, Colleges of Pharmacy and Pharmaceutical Schools connected with incorporated Universities, incorporated State Medical Associations, Incorporated State Pharmaceutical Associations, the American Medical Association, the American Pharmaceutical Association and the American Chemical Society, provided that each organization entitled to representation shall have been incorporated within, and in continuous operation in, the United States for at least five years before the time fixed for the decennial meeting of this Convention.

The Convention shall further consist of delegates appointed by the Surgeon-General of the United States Army, the Surgeon-General of the United States Navy, and the Surgeon-General of the United States Marine Hospital Service, and other organizations represented in the Convention of 1900; each body and each branch of the United States Government above cited shall be entitled to send three delegates to this Convention.

MEMBERS OF THIS CONVENTION shall consist of those delegates whose credentials have been accepted by the Convention, and who have been given seats in the body. Delegates who are not present at the Convention shall not be considered members, but alternates of such absent delegates, if present, may be members. In no case, however, shall any body be represented by more than three delegates. Each member shall be entitled to only one vote in the Convention upon all questions.

THE BOARD OF TRUSTEES shall consist of five delegates, elected by the Convention, together with the President of the Convention and the chairman of the Committee of Revision. Four members shall constitute a quorum. It shall be the duty of the Board of Trustees to permanently invest the funds of the Convention; to execute contracts of agreements for the publication of the Pharmacopœia; to pay experts and others for services performed; to transact all business involving financial matters and to perform such duties as the Convention may from time to time direct.

THE COMMITTEE OF REVISION shall consist of twenty-five members, to be elected by the Convention, together with the President of the Convention, *ex-officio*. Fourteen shall constitute a quorum. Members may send their vote to the chairman of the committee in writing. The committee shall have entire

charge of the preparation of the manuscript and reading proof for the revised Pharmacopœia, and shall, through its chairman, appoint such sub-committees, committees on research and experts as may be required for the proper revision of the work. The Committee of Revision shall elect a chairman, two vice-chairmen and a secretary to serve until their successors are elected. The chairman shall direct the work of revision, receive and announce the votes, attend to the correspondence and prepare the final manuscript of the work. A vacancy occurring in the office of chairman shall be filled by the votes of the committee, a majority of the whole number being necessary to elect. The chairman of the Committee of Revision shall receive such salary for his services as may be determined by the Board of Trustees. He shall appoint all sub-committees, research committees and experts with the advice and consent of the Committee of Revision, and shall present to the Convention a report of the work of the Committee of Revision, and shall hold office until his successor is elected. The Committee of Revision shall receive such nominal compensation for their services as the Board of Trustees shall direct. The members of the Committee of Revision shall be elected for their especial fitness and technical knowledge of the various subjects required for the proper revision of the work, and shall hold office until their successors are appointed. Vacancies in the Committee of Revision may be filled by election by ballot by the Committee of Revision.

The following resolutions were offered by Joseph P. Remington, and adopted by the Convention:

Resolved, That the treasurer of the Committee of Revision of the Pharmacopœia of 1890 be directed to pay over any balance remaining in his hands after the payment of all outstanding debts incurred by the Committee on Revision and Publication of the Pharmacopœia of 1890, and any moneys from any source received hereafter by him, to the treasurer of the U. S. Pharmacopœial Convention.

Resolved, That the treasurer of the Committee of Revision of the Pharmacopœia of 1890 be directed to pay immediately to the treasurer of the U. S. Pharmacopœial Convention the sum of $1,000, to be held subject to the order of the Board of Trustees, to defray such expenses as may be necessary in carrying on the work of the revision and publication of the Pharmacopœia of 1900.

Resolved, That the Committee of Revision and Publication of the Pharmacopœia of the United States of America for the seventh decennial revision be authorized to direct that their chairman, with their chairman of the Finance Committee and their treasurer, constitute a committee with full power to transact all business relating to the closing of their accounts and the transfer of the balance remaining in the treasurer's hands to the treasurer of the U. S. Pharmacopœial Convention.

Resolved, That the Board of Trustees be directed to print, bind and publish the eighth decennial revision of the Pharmacopœia of the United States of America for the account of the U. S. Pharmacopœial Convention, and to take out a copyright in the name of the Board of Trustees of the U. S. Pharmacopœial Convention.

Resolved, That the Committee of Revision shall print in a conspicuous place in the book a definite date, reasonably distant from the actual date of publica-

tion, announcing when the new Pharmacopœia is intended to go into effect and to supersede the preceding one.

Resolved, That the Committee of Revision is authorized to prepare, and the Board of Trustees is authorized to publish, a supplement to the U. S. Pharmacopœia, if in the opinion of the Committee of Revision and Board of Trustees it be deemed advisable.

Resolved, That the Committee of Revision shall report a complete plan for the revision of the Pharmacopœia at the next decennial convention.

The following resolution, offered by Joseph P. Remington and amended by Charles Caspari, Jr., upon the suggestion of H. H. Rusby, was also adopted:

Resolved, That this Convention direct the Board of Trustees and Committee of Revision to permit the use of the U. S. Pharmacopœia for the purpose of comment by all books and commentaries upon the same terms as granted by the Committee of Revision and Publication of the U. S. Pharmacopœia of 1890.

AMERICAN PHARMACEUTICAL ASSOCIATION.

The forty-eighth annual meeting of the American Pharmaceutical Association was held in the Jefferson Hotel, at Richmond, Va., May 7th to 12th. The first general session convened on Monday, at 3.15 P.M. Soon after calling the session to order, the President, Prof. A. B. Prescott, of Ann Arbor, Mich., introduced Governor Tyler, who made a pleasing address of welcome, and also Mayor Taylor, who extended the privileges of the city. Dr. W. C. Alpers, of New York, having been called upon to respond in behalf of the Association, paid a high tribute to Virginia and to her capital city. Upon invitation, H. P. Hynson, of Baltimore, also returned the thanks of the Association.

Lewis C. Hopp, of Cleveland, O., First Vice-President of the Association, was called to the chair, while President Prescott delivered his annual address. The address was comprehensive in character, and while no radical measures were recommended in it, we believe that every pharmacist who is privileged to read it in its entirety will be prouder of his calling and more reconciled to prevailing conditions as marking but evolutionary steps in a wider growth and greater specialization; and that he will be encouraged to pursue his work with the consciousness that his is an occupation requiring not only special knowledge and special skill, but keen business insight as well, surely a combination of qualifications which must ultimately reflect credit and honor upon those possessing it. After considering the several departments of practice, namely, those of the wholesaler, the manufacturer and the dispenser, the President said: "In the main their interests are in common." Then taking up the subject of teaching, he said:

"With the practitioners of pharmacy in its several divisions of labor belong the teachers of pharmacy and of the sciences applied in its practice. Pharmacy has been sometimes the parent and sometimes the child of chemistry, of botany, of pharmacology. The relation of the apothecary's art to modern science is not estimated at full value. Research came out of pharmacy in the last century and will return thereto in the next. Now, whatever learning may claim for itself, it may claim for its teachers as well. Teachers in college must be in touch with the activities of life. If able to teach or to learn they

must be hand in hand with the things that are taught, as these are worked out in the world; for it is things and not theories that are taught in colleges. Time has passed when a college can continue to live shut in from the breath of life, the field of action. Here is the telephone, the ice-making machine, the coal-tar products—they are not theories, they are facts, and to be taught as such.

"Actual business interest never works against the interest of science in the final test. In the universities at present there are being established broad and unbiased studies of industrial economy and higher commercialism. In our trade associations measures of relief are being put to trial by men of practical vigor. Each set of workers may and will learn from the other, and add to the common stock of advantage."

In reference to the subject of specialization he said:

"With this view of the extended range of pharmaceutical sciences and the separate branches of pharmaceutical practice, we should be ready to welcome the service of specialists and to provide for their training, all in the fold of pharmacy. As truly as we have retail and wholesale and manufacturing houses, or as different men do different things in a common drug store, so surely must each line of practice employ scientific specialists in its own range of work.

"It is not *every* druggist that is to open an analytical laboratory for the aid of busy physicians and health officers; it is but enough to meet the demand, and a very good beginning has been made in many places. Already bacteriology is an employment, usually with other duty, in a few retail establishments; the call for it is increasing without doubt, and by all means to be cultivated, but I do not think it likely that the majority of graduates in pharmacy will ever be competent bacteriologists. The same may be said of physiological chemistry and of practical pharmacology. The latter is in increasing demand, is extensively required now in manufacturing houses and may become important as an analytical method in valuation. Food and water analyses, as specialties, belong in the profession of pharmacy, of course not exclusively. Advanced pharmacognosy has already been mentioned as a specialty in wholesale work. Analytical chemistry, the earliest of these applications of science, is now well established in a large number of houses—retail, wholesale and manufacturing—and is finding the economical limit of its usefulness, which extends as the standards of the Pharmacopœia are more and more enforced. Next in the advance is the carrying of chemical analysis into organic work and the estimation of potent principles, a science for which pharmacy is mainly responsible and most directly interested. There will be more use of these several sciences in the practice of pharmacy when the sciences make themselves more capable to answer its practical questions.

"The training for these specialties, as it seems to me, can be carried as advanced studies in the colleges of pharmacy in one of two ways, or in both. First, undergraduate time can be found for one advanced study which each student must elect from among several offered. Second, the several advanced studies can be offered to graduate students, some of whom would select one or more of these studies for graduate work in training for special service. The regular studies should not be supplanted by the specialties. In going beyond the regular studies a student gains more by thorough work in one subject than by scattered work in various subjects. Finally, students of insufficient

preparatory education cannot take advanced studies with advantage. And graduates who have shown inaptitude for scientific service may well be advised against undertaking to prepare for it.

"While colleges and universities, in possession of libraries and laboratories and museums and teaching specialists, are the natural centres of specialization and research, these are also highly developed in the larger business establishments, equipped as they may be in the means of investigation. And solitary workers, as well, contribute a great deal to the enlargement of science and the enriching of its literature, personal power overcoming hindrances and making an environment for itself."

Among other subjects considered in the address were: literature for research, the means for advancement, the work of the several societies and, finally, the increasing of the membership of the Association.

The committee to consider the President's address, which was appointed later on, was as follows: L. C. Hopp, W. S. Thompson and H. P. Hynson.

After the presentation of several reports a recess was taken for the selection of the Committee on Nominations.

The following were appointed by the President as the Committee on Time and Place of the Next Meeting: S. A. D. Sheppard, Wm. C. Alpers, William S. Thompson, Oscar Oldberg and H. M. Whelpley.

SECOND GENERAL SESSION.

The session on Tuesday morning was occupied largely with the reception of reports. The first one presented was that of the Nominating Committee, which was adopted, and the Secretary being instructed to cast a ballot, the following were elected officers for the ensuing year: President, John F. Patton, York, Pa.; First Vice-President, J. H. Beal, Scio, O.; Second Vice-President, J. W. Gayle, Frankfort, Ky.; Third Vice-President, E. A. Ruddiman, Nashville, Tenn.; Treasurer, S. A. D. Sheppard, Boston; Secretary, Chas. Caspari, Jr., Baltimore; Reporter on Progress of Pharmacy, C. Lewis Diehl, Louisville, Ky.; Members of the Council: T. Roberts Baker, Richmond; Lewis C. Hopp, Cleveland; and H. P. Hynson, Baltimore.

By a special order in the proceedings Prof. Jos. P. Remington presented an eloquent memorial address on the life and work of Prof. Wm. Procter, Jr., who, it was stated, attended the Association for the last time when it met in Richmond twenty-seven years ago. (See page 255.) High tribute was paid to the memory of this distinguished teacher and pharmacist, and among others pronouncing eulogies upon him were: John F. Hancock, of Baltimore, who was President of the Richmond meeting (in 1873), Dr. Alpers, Professor Prescott, and A. E. Ebert, the latter of whom moved a vote of thanks to Professor Remington for his preparation of the memorial, which was carried.

Colonel J. B. Purcell, of Richmond, delegate from the National Wholesale Druggists' Association, and F. E. Holliday, of Topeka, Kan., delegate from the National Association of Retail Druggists, were each introduced and given an opportunity to address the Association.

The following committees also reported: National Formulary, Metric Weights and Measures, Auxiliary Committee on Membership and the regular Committee on Membership. In the latter report, the Chairman, Geo. W. Kennedy, of Pennsylvania, stated that the number of active members was

1,155; life members, 108; and honorary members, 13, making a total of 1,276; the number of deaths during the year was 12. The number of applicants reported for membership during the meeting was 123.

THIRD GENERAL SESSION.

The first matter considered at the afternoon session was the report of the Committee on European Tour, which was presented by the Chairman, Caswell A. Mayo, of New York. It was to the effect that arrangements had been perfected whereby any member of the Association, or any person indorsed by the Association, can secure special tickets for $280.00, providing for a thirty-five days' tour, visiting London, Dover, Ostend, Brussels, Paris, and including all expenses, save luncheon when ashore. These tickets provide for a first-class steamer passage going out on the "Aller" on June 27th, and are good to return on any of the North German Lloyd steamers within a year from the date of issue. Provisions were also made for a number of side trips at some additional expense.

The Treasurer, S. A. D. Sheppard, reported upon the finances of the Association for the nine months ending April 1, 1900, as follows: Expenditures, $6,540.20; cash on hand, $784.31, making the total cash $7,324.51.

A financial report was also made by the Secretary, Chas. Caspari, Jr.

A letter from Dr. E. R. Squibb, of Brooklyn, acknowledging the receipt of the resolution passed at the last annual meeting in commemoration of his eightieth birthday, was read by the Secretary.

Among other reports received at this session was that of the Committee on Time and Place of Meeting. After considerable discussion the Association decided to meet next year in St. Louis, some time during the month of September.

Professor Remington called attention to the lack of interest in the Association by retail pharmacists, and asked that a special committee of five be appointed to consider the welfare of the organization and to report during the meeting a plan for arousing interest in its work. The suggestion was favorably received.

SECTION ON COMMERCIAL INTERESTS.

The work of the sections was next begun and at 4.20 P.M. the Chairman, Prof. J. M. Good, of St. Louis, called the first session of the Section on Commercial Interests to order. The Secretary of the Section, F. W. E. Stedem, of Philadelphia, occupied the chair while Professor Good delivered his annual address. Leaving the patent medicine and cut rate problems to the National Association of Retail Druggists, the speaker thought the following questions ones to which the Association should devote itself: (1) Methods whereby legitimate pharmacy may be made profitable; (2) Methods for interesting physicians in preparations of the Pharmacopœia and the National Formulary; (3) The practice, by physicians, of dispensing their own remedies; (4) Checking the growth of the Free Dispensary Evil; (5) A proper amount of the commercial spirit in the practice of legitimate pharmacy; (6) Buying, selling and care of stock; (7) Methods of advertising; (8) The "Commercial Course" in a College of Pharmacy; (9) The commercial value of a pharmaceutical education.

He said that a National Pure Food and Drug Law is among the possibilities of the future. In considering the question of the Stamp Tax he recommended going slowly in attacking the revenue law.

F. E. Holliday, delegate from the N. A. R. D., was given an opportunity of explaining the work now being carried on by that organization, and his remarks occasioned an animated discussion.

A paper on "Methods of Advertising" was presented by F. W. E. Stedem, after discussion of which the session adjourned.

The work of the Section was resumed on Wednesday morning. The reading of papers being in order, the first one presented was on a "Scheme to Popularize the U.S.P. as the Only Means to Combat Quack Medicines," by Louis Emanuel, of Pittsburg, Pa. This paper was read by the Secretary, as was also the following one on "The Commercial Value of a Pharmaceutical Education," by Joseph Jacobs, of Atlanta, Ga.

Caswell A. Mayo moved that the Section adopt a resolution petitioning Congress to repeal Schedule B of the Revenue Law. The motion carried, and was referred to the general session for final action, with the result that it was adopted.

Prof. F. G. Ryan, of Philadelphia, gave a talk on "A Commercial Training Course in a College of Pharmacy." He said he was impressed with the necessity of commercial training for young men in drug stores, especially those in the smaller stores, where most all of the business is transacted by the proprietor. He said also that this special training could not be obtained in a commercial college. He presented a synopsis of a course which he had taught, and explained some of the features of the work. A hearty vote of thanks was tendered the speaker for his presentation of this subject.

The report of the Committee on Practical Pharmacy and Dispensing was made by its Chairman, H. P. Hynson, of Baltimore. The report embodied a detailed account of the work done by the committee, and the data collected led to some general observations in regard to the compounding of prescriptions which were of much significance.

The report was freely discussed, and that it was a valuable one was confirmed by the action of Council in organizing a new section of the Association on Practical Pharmacy and Dispensing.

A resolution by F. W. E. Stedem, recommending that the Association indorse the N. A. R. D., was adopted by the Section and approved at the final general session.

The following are the officers of the Section selected for the ensuing year: Chairman, Charles A. Rapelye, Hartford, Conn.; Secretary, F. W. Meissner, La Porte, Ind.; Executive Committee, Henry Willis, Quebec; F. E. Holliday, Topeka, Kan., and F. W. E. Stedem, Philadelphia.

SCIENTIFIC SECTION.

The first session of this section was called to order by the Chairman, Prof. F. G. Ryan, at about 3.15 P.M. Wednesday. The first order of business was the reading of the Chairman's address, the Secretary, C. A. Mayo, occupying the chair while it was being presented. After reviewing the scientific achievements of the Association during the period of its existence, the speaker took up the subject of specialization. He said:

"Formerly the scientific work of this Association was very largely contributed by men actually engaged in the practice of pharmacy; now we may note that, like all other occupations, specialism is the order of the day. Our investigations are made by those best qualified for a particular kind of work. We have our chemists, botanists and pharmacists, and these again subdivided, and each giving his attention and study to some particular branch of his chosen science, but it is the exception rather than the rule that we find the investigator still wielding the mortar and pestle.

"As in other occupations and professions, is not the division of labor which characterizes the present time a necessity in pharmacy, if healthy and progressive advancement is to be made?

"In his address one year ago before this section, Dr. H. H. Rusby voiced the sentiments of this Association in an appeal for investigations in pure science. The present Chairman echoes the same sentiments, but does not believe this should be the work of the retail pharmacist; his education should be so directed as to fit him for the practical application of the scientific truths brought to light by original investigators, leaving original investigation to those whose natural inclinations, ability and education fit them for advanced scientific research."

He then considered some of the subjects which are coming up for investigation, as follows:

"With a view of extending the usefulness of our Association, your Chairman would call your attention to a few subjects which, in his opinion, seem to offer fertile fields for investigation by our members. A recent paper by Mr. F. B. Kilmer, on the cultivation of medicinal plants, shows that but little attention has been given to this subject in our own country. With a knowledge of the progress made in the cultivation of cinchona and some other medicinal drugs, is it not probable that equal success may be attained with many of our indigenous plants? As our knowledge of the active plant constituents becomes more exact, it would seem quite within our power to control to a certain extent the production of such constituents in the growing plants. These investigations should become a part of the work of our Government in its Department of Agriculture. Indeed, we believe this subject of sufficient importance to this Association to warrant the appointment of a committee for the purpose of securing such investigations by the proper government officials at Washington.

"With our Pharmacopœia rapidly becoming the legal standard for the purity and strength of official substances in the various States, our manufacturing chemists and pharmacists can greatly aid in establishing such standards as will be within the range of possibility in commercial manufacturing, and, at the same time, protect the public health. With the strict enforcement of our food and drug laws many annoying prosecutions may occur, and persons entirely innocent of intentional wrongdoing be made to suffer.

"With the rapid growth and extended use of modern synthetic remedies, the employment of serum therapy and antitoxins in medicine, it seems desirable that pharmacists should have a greater knowledge of the physiological action of drugs, upon which the manufacture and use of these compounds so largely depends. Papers upon this subject would prove of interest to this section.

"In his address as President of the British Pharmaceutical Conference last year, Mr. J. C. C. Payne, quoting the eminent scientist, Professor Huxley,

states that the latter declared "that he would abolish materia medica from the medical curriculum, and cannot understand the arguments for obliging a medical man to know all about drugs and where they come from." Evidence is not wanting that many of the physicians of our own country hold the same opinion. In the light of these facts there need be no fear for scientific pharmacy, and this Association will supply willing and able workers, as it has in the past, to meet the emergencies as they may arise."

The address was referred to a committee consisting of Messrs. F. E. Stewart, J. M. Good and A. B. Stevens.

The Secretary of the Association, Chas. Caspari, Jr., announced that the Committee on the Ebert Prize recommended the award of the prize to Edward Kremers and Oswald Schreiner for their paper presented at the meeting last year on "Nitroso Derivatives of Caryophyllene and Cadinene and their Bearing on the Characterization of the Sesquiterpenes."

The papers of this section were for the most part presented in groups, discussion being deferred until all the papers of a group were read.

APPLICATION OF THE MODIFIED ALKALIMETRIC METHOD TO THE ASSAY OF DRUGS AND GALENICALS.

By H. M. Gordin.

The drugs to which the method was applied were opium, nux vomica and cinchona, and the galenicals were the fluid extracts of nux vomica, hydrastis and cinchona. The results obtained showed the method to be quite satisfactory.

SHORT DIRECTIONS FOR THE ASSAY OF OPIUM.

By H. M. Gordin and A. B. Prescott.

According to a statement by the authors, this method is a modification of one proposed by them last year, with the exception that they now titrate by standard acid after removal of the alkaloid, and employ hot extraction with chloroform alone.

ALKALOIDS OF BOCCONIA CORDATA.

By Paul Murrill and J. O. Schlotterbeck.

The plant is a native of Japan, and belongs to the Papaveraceæ. It has been introduced into the United States, and is commonly known as Tree Celandine. All the parts of the plant examined by the authors contained alkaloids, these being present in largest amount in the rhizome. Three distinct alkaloids were isolated and subjected to combustion analysis. These were Protopine ($C_{20}H_{19}NO_5$), β-Homochelidonine ($C_{21}H_{21}NO_5$) and Chelerythrine ($C_{21}H_{17}NO_4 + C_2H_5OH$). Sanguinarine has been reported as present in the plant, but the authors have not been able to identify the free alkaloid.

EXTRACTION AND ESTIMATION OF COLCHICINE.

By H. M. Gordin and A. B. Prescott.

After having tried a number of solvents, the authors found that extraction of the drug with hot alcohol for two hours completely removed the colchicine. The estimation of this principle was easily accomplished by saponification

with standard alkali and titration with standard acid, phenolphtalein being used as indicator. This method of estimation is based on the fact that colchicine is an ethereal salt rather than an alkaloid.

ALKALOIDS OF CEANOTHUS AMERICANUS.

By H. M. Gordin.

About ½ per cent. of an alkaloidal substance was obtained from this plant which is a mixture of ether-soluble and ether-insoluble constituents. The substance is not crystalline and none of its compounds are precipitable. Nitrogen is present and the question as to whether the substance is an alkaloid or a mixture of alkaloids remains to be settled.

SUGGESTIONS RELATIVE TO THE PROPOSED INTRODUCTION OF POWDERED DRUGS INTO THE U.S.P.

By A. Schneider.

Among the subjects considered in this paper were: Selection of drugs, precautions in regard to heating, atmospheric conditions, methods of powdering and sifting, methods of preserving, general characteristics, histological structure, etc., etc.

COLOR STANDARDS FOR THE VEGETABLE DRUGS OF THE U.S.P.

By Henry Kraemer and Herbert J. Watson.

This paper was a continuation of the one published in the Proceedings of the A. Ph. A. last year. The crude drugs were arranged according to the standards already given and then followed an alphabetical arrangement of the vegetable drugs, together with their colors, external and internal, in a crude state and in a powdered condition.

NOTES ON THE EXAMINATION OF JALAP ROOT DURING THE PAST SIX YEARS.

By Lyman F. Kebler.

It was shown by statistics that jalap root grown under favorable conditions contained much more resin than 12 per cent., the 1890 Pharmacopœia standard. Investigators of late years, however, have placed themselves on record to the effect that this standard is too high.

The writer of this article obtained results which indicate that while it is not desirable to place the standard as high as 12 per cent., he does not agree with the general opinion that it should be as low as 8 per cent. 10 per cent. should probably be the lowest.

The large number of samples examined varied from 17 per cent. in 1894 to 1·87 per cent. in 1899. It seemed that the jalap root supplied continued to diminish constantly in per cent. of resin from the time of advent of the 1890 Pharmacopœia. Jalap root of 12 per cent. could be secured until the past few years.

THE PHARMACOLOGIC ASSAY OF DRUGS.

By E. M. Houghton.

In discussing the theory of the pharmacologic assay of drugs, the author claimed that the action of drugs should be regarded as quantitative rather than qualitative. He said that a number of constituents have the same qualitative

action but are different in quantitative effect. Some of the general rules to be observed in this method of assay were given, and the observation made that antitoxins may likewise be assayed in this manner.

PHYSIOLOGICAL *vs.* CHEMICAL AND MICROSCOPICAL EXAMINATION OF DRUGS.

By Lyman F. Kebler.

The writer reported the results of two examinations, which appear to show conclusively that the physiological indications ought to be considered in the standardization of drugs.

The first was a fluid extract of castor-oil leaves, which exhibited symptoms of belladonna poisoning when administered internally.

On examining the fluid extract chemically it was also found that an alkaloid was present. This alkaloid when removed and administered in the usual way produced dilation of the pupil.

The leaves were next examined physiologically, chemically and microscopically, with the result that chemically it was impossible to identify the alkaloid; the microscope failed to reveal the presence of a mydriatic plant, but physiologically the presence of a solanaceous plant was clearly established.

A fluid extract of castor-oil leaves was then purchased in the open market, and it was found that it neither gave a reaction for alkaloids nor produced dilation of the pupil.

A castor-oil leaf grown by the author, when submitted to the same examinations, proved conclusively that there was no indication of a mydriatic effect.

THE ASSAY OF DRUGS BY THE USE OF LIVING PLANTS.

By Henry Kraemer.

An abstract of this paper was read in the absence of the author by Edward Kremers, who also explained the theory of ionization and the effect of the liberated ions upon living tissues. The paper will be published in a later issue of this Journal.

A second session of the Section was held Tuesday evening. The first order of business was the election of officers for the ensuing year. The result was as follows: Chairman, Oscar Oldberg, Chicago; Secretary, Lyman F. Kebler, Philadelphia; W. A. Puckner, Chicago, being subsequently chosen as associate member.

The report of the Committee on Research was presented by the Chairman, A. B. Lyons, of Detroit. Standardization was considered to be the most important work of the committee, and in order to give the committee the standing that it ought to have and to enable it to carry on detailed investigations, the suggestion that it should have a laboratory of its own, under the direction of a competent man able to devote all his time to the work, was again stated. Meanwhile, the committee desires to be understood as utilizing the laboratory facilities of the various colleges of pharmacy, and to formulate a plan whereby it may co-operate with a committee of the American Medical Association or the recently organized Therapeutical Society for the more thorough investigation of the various drugs and medicines—that is to say, for their chemical and physiological assay, the work of one committee thus supplementing that of the other.

The reading of papers was resumed as follows:

PHARMACEUTICAL BACTERIOLOGY.

By Albert Schneider.

The author said that students of pharmacy should be taught the relation of bacteria to the deterioration of the various drugs and preparations, and that they should possess such a knowledge of the subject as will enable them to examine various commercial products. On the other hand, an endeavor should not be made to teach students of pharmacy bacteriological diagnosis.

THE ALKALOIDS OF SAMBUCUS CANADENSIS.

By W. C. Alpers.

The presence of a hitherto undiscovered alkaloid in the bark of this plant was reported by the author. The principle responded to various of the alkaloidal reagents and appeared to possess the characteristics of coniine. It was not, however, submitted to ultimate analysis. The bark was the only part of the plant examined, and it was recommended to use the fresh article, as the odor entirely disappeared on keeping.

URINALYSIS BY THE PHARMACIST.

By Frederick T. Gordon, U. S. Navy.

(Read by title.)

URINALYSIS BY THE PHARMACIST.

By G. Parisen.

(Read by title.)

EXAMINATION OF URINE, SPUTUM AND BLOOD.

By F. W. E. Stedem.

The author gave some general directions for the work indicated by the above title, and mentioned a number of reference books which he had found useful.

A lengthy paper, answering various queries proposed by the Scientific Section and reporting on the examination of numerous drugs and preparations of the market, was read by E. L. Patch, and was referred to the Committee on Revision of the U.S.P.

WILD CHERRY BARK AND ITS PREPARATIONS.

By A. B. Stevens.

During the course of his work the writer made over 250 estimations. Experiments were made to ascertain which portion of bark contained the glucoside, and it was found that the inner layer contained practically all of this principle, not much being found in the middle layer and none in the outer layer. The fact was also revealed that, there being more of the green layer of bark on the north side of the tree, more of the glucoside was found in this portion than that on the south side. Experiments with the fluid extract showed the pharmacopœial method to be unsatisfactory, in that the amount of menstruum is too small and also owing to the fact that evaporation does not leave a trace of acid. With regard to the syrup the author said that maceration should be carried on in the percolator in which the drug is to be percolated, and percolated directly upon the sugar.

ATROPA BELLADONNA, OR SCOPOLA CARNIOLICA.

By A. R. L. Dohme and Hermann Engelhardt.

(Read by Charles Caspari, Jr.)

The authors said that according to the medical profession the scopola alkaloids are more efficient than are those of atropa. Triplicate assays of these drugs were made, using Professor Keller's method, and the results showed Scopola to be richer in alkaloids than Atropa.

NOTES ON INDIGENOUS PLANTS.

By Caswell A. Mayo.

The writer said that in the early history of Virginia frequent allusions were made to the indigenous drugs. He gave a number of extracts from the writing of Colonel William Byrd, Captain John Smith, Hugh Jones, and others of the early Colonial period, stating that these records were for the most part in such form as not to be available for the uses of the student of botanical history.

A SO-CALLED IPECAC—POLYGALA ANGULATA.

By Henry Kraemer.

(Read in abstract by E. H. Bartley.)

This paper will be published in a later issue of this Journal.

PROXIMATE ANALYSIS OF EUPATORIUM PERFOLIATUM.

By Charles A. Walter.

The important constituents isolated and studied by the author were: (1) a coloring principle ($C_{27}H_{30}O_{17}$); (2) a tannin ($C_{13}H_{18}O_7$); and (3) a bitter principle ($C_{83}H_{58}NO_{10}$).

WHAT REPRESENTATIVE PHARMACISTS AND PHYSICIANS THINK ABOUT PLASTERS.

By Seward W. Williams.

The paper embodied a classification of replies to queries bearing on the question: "To what extent are official plasters employed in the practice of medicine and pharmacy?" The replies were from members of the American Medical Association and the American Pharmaceutical Association, and indicated that, for the most part, the official plasters are being superseded by the rubber-combination plasters.

COMPOUND SPIRIT OF ETHER AND ETHEREAL OIL.

By George W. Boyd.

(Read by Charles Caspari, Jr.)

The author commented upon the unsatisfactory character of the compound spirit of ether and said that the difference in names leads to confusion.

THE NATURE OF COMMERCIAL SANGUINARINE NITRATE.

By J. O. Schlotterbeck.

The writer's experiments led to the conclusion that the so-called sanguinarine of the market is largely composed of chelerythrine. He therefore thought that the matter should be cleared up by the Pharmacopœia.

At this juncture the Section took a recess of a few minutes to permit of a Special General Session for the reading of the minutes of Council. It was reported that ten members had been added to the committee to prepare an auxiliary report on the National Formulary; also that a new section of the Association, to be known as the Section on Practical Pharmacy and Dispensing, should be instituted.

The Scientific Section having resumed its work, Dr. F. E. Stewart gave the report of the Committee on the Chairman's Address, which recommended that the suggestion of the chairman to bring the matter of drug cultivation before the Secretary of Agriculture be favorably acted upon and that a committee be appointed for the purpose. The report was adopted and a committee was selected as follows: H. H. Rusby, New York; Henry Kraemer, Philadelphia, and D. M. R. Culbreth, Baltimore.

The report of the Committee on the Revision of the U.S.P. was read, in the absence of the Chairman, Leo Eliel, by F. W. E. Stedem.

The report, which was a brief one, embodied recommendations for an alternative process for chlorine water; a 25 per cent. solution of carbolic acid in alcohol, to be known and dispensed as "household carbolic acid," and exact figures or working formulas for saturated solutions.

The following papers were then presented:

ON ALCOHOL AS AN ANTIDOTE FOR CARBOLIC ACID POISONING.

By E. V. Howell.

(Read by H. W. Whelpley.)

The experiments carried out by the author tended to show that the effect of alcohol in counteracting the effects of carbolic acid is probably one of dilution.

A motion by C. S. N. Hallberg, recommending that a 25 per cent. alcoholic solution of carbolic acid be suggested to retail druggists, to be sold for household purposes, was adopted.

A paper on

CERATE OF CANTHARIDES,

By G. E. Barksdale,

and one on

A NEW FORMULA FOR AROMATIC SPIRIT OF AMMONIA,

By W. C. Alpers,

were read by title.

ADLUMIA CIRRHOSA—A NEW PROTOPINE-BEARING PLANT.

By J. O. Schlotterbeck.

Protopine, as stated by the author, was the only alkaloid present in the plant, and its separation and purification were very easily accomplished. The author also said that protopine and fumarine appear to be very similar, and that if they were found to be identical, the Fumariaceæ should not be regarded as an independent family, but should be included in the Papaveraceæ. Following the rule of botanists, with regard to priority, the name of the principle should be fumarine.

ON THE PHARMACOPŒIAL RECOGNITION OF DIPHTHERIA ANTITOXIN.

By J. W. England.

The author considered the theory of action of diphtheria antitoxin and the methods of preparation. In its administration an excess should be used, rather than small quantities. In conclusion, the writer suggested that methods for its assay be adopted, so as to secure uniform products by manufacturers.

A motion to appoint a committee to consider the feasibility of the admission of this antitoxin into the Pharmacopœia was adopted. It was suggested that specialists should serve on the committee, and their appointment was left for a later time.

Dr. A. R. L. Dohme was reëlected to serve on the Committee on Research and Prof. J. O. Schlotterbeck was chosen to take the place of Prof. J. U. Lloyd, who preferred not to be re-elected.

The Section was then adjourned.

EDUCATION AND LEGISLATION.

The first session of this Section was called to order Friday at 2.15 P.M. by the Chairman, Dr. C. B. Lowe, of Philadelphia. Dr. F. E. Stewart was asked to preside while the Chairman delivered his annual address. It was in part as follows:

"In connection with the first of these subjects, viz., 'The Model Pharmacy Law,' I would call your attention to the following matters; although it is quite probable that most of them will also be reported upon, yet their importance is sufficient to warrant me in thus presenting and reiterating them.

"In the first place, as pharmacy laws are enacted for the benefit of the citizens of the several States (and only incidentally for that of pharmacists), it is entirely reasonable and just that all expenses of administering such laws should be met by direct appropriation from the State treasuries, as is the case with the administration of other State laws, or State departments, and not by the fines or fees collected by the pharmacy boards. When the expenses of administering a pharmacy law are paid out of the accruing fines and fees, it lays the Board open to the criticism of rejecting applicants for registration so that they can get another fee from them, or of being unduly harsh in the administration of the law so that the accruing fines may swell their receipts. It also seems to me that it should be the duty of the prosecuting or district attorneys to prosecute all violators of the pharmacy law, as they do the violators of other laws of the State. In this connection I might say that the evidence which is required in some States to convict a non-registered pharmacist of the violation of the law by the compounding of prescriptions, viz., that such compounding was done in the presence of the witness, defeats justice, as in all such cases the compounding is done in privacy, special care being taken to exclude witnesses. It should be evidence enough that the written prescription was received over the counter and the compounded prescription handed back.

"It would seem to me that the time is near at hand when the expression of opinion, which was unanimously agreed to at the last meeting of this Section, viz., 'that none but recognized graduates should be received by boards of phar-

macy for examination,' should be crystallized into action. Some twelve years ago, in a conversation with Professor Maisch, he stated 'that if he did not hold a professorship in a college of pharmacy he should strongly urge this matter.' At that time perhaps few held such an opinion; at the present time probably the majority do.

"I should also like to see incorporated into each pharmacy law 'that the conviction of any pharmacist in a court of justice for violating the liquor or license law of his State should forfeit his certificate of registration.' This would be a much more effectual way of killing off the 'saloon druggist' than by simply fining him.'"

Having considered a number of subjects of a more or less educational character, the chairman then said:

"I am sorry that the good work done by many of the pharmaceutical colleges of our land is not more generally recognized by the public at large. Why is it that our rich men (even druggists themselves) leave their money to universities, hospitals, medical and technical schools, but seldom remember our own institutions? Is it because we have been so modest about their worth (pharmacists are generally most modest men) that the public does not recognize their value? If it were wise to let the public know how completely their fate is often in the hands of the pharmacist, the work of the colleges in turning out educated pharmacists would be better appreciated."

The address was referred to a committee consisting of Messrs. C. S. N. Hallberg, F. E. Stewart and F. W. E. Stedem.

The report of the Secretary, J. A. Koch, of Pittsburg, was read and referred to the Publication Committee.

The reading and discussion of the "Model Pharmacy Law" was then taken up, and occupied the attention of the members during the remainder of this session, the evening session and a portion of the time of the third session Saturday morning.

The draft of this law, entitled "A general form of pharmacy law suitable for enactment by the several States of the United States," was framed by Prof. J. H. Beal, of Scio, O., and was read by him section by section for discussion and amendment. The general scope and meaning of the proposed law were defined by the author as follows:

The Meaning of the Title "Model Law."—At the outset, the writer frankly admits that his idea of what the model should be differs widely from that of some of the foremost writers upon the subject, and he, therefore, feels called upon to set forth, briefly, his reasons for the draft which is herewith presented.

In the first place, the writer is not in accord with some as to the construction to be placed upon the title "Model Law." Many have understood from this title that the proposal is for a form of law which shall be *ideally perfect*, both from a public and from a professional standpoint. From this interpretation the writer is compelled, by what he believes to be the necessities of the case, to dissent. An ideal law would be possible of enactment only in an ideal community, and if communities were ideally perfect, such a form of law would be useless. What was meant by the resolution offered at Montreal was not a form of law which should be without fault, and, therefore, incapable of further improvement, but a *workable* draft, adapted to enactment in the various States where any form of law revolutionary in character would not receive serious consideration. While

this may be a disappointment to some who have expected that the model would present some new and startling innovations, the author is of the opinion that a draft based upon a conservative plan will be of far greater helpfulness in promoting progress in pharmaceutical legislation than one based upon purely theoretical considerations could possibly be.

General Plan of the Model Law.—In accordance with the view above expressed, it has been attempted to frame the model in accordance with the following principles:

(1) The model should be constructed, as nearly as possible, wholly of tried and tested material, selected from statutes already in force, and should consist of provisions which have withstood the test of experience, and have been found to work well in practice. Experiments should be tabooed, and new provisions not found in existing statutes should be admitted only upon the clearest evidence of their usefulness and practicability.

(2) The machinery required for the enforcement of the law should be simple and inexpensive, as every complication increases the liability to break-downs, and the difficulty of enforcing the law.

(3) The form of statement adopted for the various provisions should be as clear and simple as is consistent with the technicalities of legal phraseology indispensable to accuracy and certainty.

(4) The provisions of the statute should be confined to the creation, support and direction of the board of pharmacy, the requirements for examination and registration, the regulation of the sale of poisons, and the definition and punishment of offences against the law. Provisions regulative of adulterations, and other collateral matters should be left to the general statutes.

(5) Since experience has shown that nearly all State boards are hampered by lack of necessary funds for the enforcement of the law, the draft should provide ample revenue for the use of the board, and should allow its members such compensation as will justify them in devoting sufficient attention to the law to make it efficient.

The draft and the amendments proposed were referred to a special committee consisting of Messrs. J. H. Beal, Oscar Oldberg, S. A. D. Sheppard, C. S. N. Hallberg and W. C. Alpers.

The first order of business at the Saturday morning session was the presentation of the report of the Committee on National Legislation by the Chairman, F. E. Stewart. The report was brief and the following paragraph indicated the nature of the work accomplished:

"The question of National Legislation on the subject of patents and trademarks is, as you are aware, officially in the hands of a commission appointed by President McKinley for its investigation. So far as your committee was able to assist in the labors of said commission, by presenting to it the views of the Association, this has been done, and the subject of patents and trademarks as affecting medical wares has repeatedly been discussed by your committee with the commission."

The Secretary of the Section, in the absence of the chairman of the committee, read the report of the delegates to the Pure Food and Drug Congress, at Washington, in March last.

A recess of the Section was then taken to permit of a special general session, at which the minutes of the Council were read. Among other matters reported

by the Council was the provision to print 100 copies of the Report on the Progress of Pharmacy for distribution.

When the Section resumed business a delegation from the Richmond Chamber of Commerce was heard on an amendment which the chamber proposed to the Brosius Pure Food Bill, now before Congress, but when the matter came up for discussion at the final general session it was laid on the table.

The report of the committee appointed to consider the draft of the "model pharmacy" law was received and the law, with some minor amendments, adopted as a whole by the Association.

A letter from Dr. Fred. Hoffmann, now of Berlin, was read by General Secretary Caspari. The author made a plea for the establishment of a National library and museum of chemistry, pharmacy and allied branches, and recommended following the examples of the Lloyd Library and that of Dr. H. Carrington Bolton.

A resolution approving the measures supported by the U. S. Pharmacopœia Convention for the establishment of a National Bureau for the Standardization of Weights and Measures was read by F. W. E. Stedem and adopted by the section at the final general session.

A paper entitled "Preliminary Education for Students of Colleges of Pharmacy" was read by W. C. Alpers, he being the chairman of a committee appointed to consider this question. Among other things the committee said:

"It seems to the committee that the teachers of our pharmaceutical colleges have the power to institute such reforms in their own hands, if they earnestly desire to do so. An example is set them in this respect by the larger universities in all parts of the United States, who for a number of years have appointed joint committees of professors and teachers of preparatory schools, for the purpose of evolving a scheme whereby a general university examining board shall be established, whose certificate shall admit to any of the colleges agreeing to the regulations. This board will assign a value to each subject, and the requirement in that subject will be fixed; but there will be such a variety of subjects to select from, as the rules of the particular institution or the fancy of the student may demand. This plan is being matured, and it is hoped that all the details will be decided this spring. There is no reason why a similar joint committee could not be appointed by our pharmaceutical colleges. In the entrance examinations the standard of a three years' high school should be the minimum, but, by selecting a large series of subjects and assigning a value to each one, the variations in the requirements of different schools and localities could be met."

The other papers read before the Section were: "Status of the Drug Trade of Maine Under the Prohibition Law of the State," by Charles K. Partridge; "Fluid Extract Labels," by E. G. Eberly; "Under What Restrictions Should Pharmacists be Permitted to Sell Liquors?" by G. C. Simms, and "Erroneous Prescriptions," by Louis Schulze.

The Chairman, C. B. Lowe, and the Secretary, J. A. Koch, were elected to serve in their respective capacities another year.

FINAL GENERAL SESSION.

The following were chosen officers of the new Section on Pharmacy and Dispensing for the coming year: Chairman, H. P. Hynson; Secretary, F. W. E. Stedem, and Associate, C. Lewis Diehl.

The Committee on General Prizes reported as follows: First prize, awarded to H. M. Gordin and A. B. Prescott, for their paper on "Directions for Certain Alkaloidal Assays;" second prize, to O. Schreiner and Edward Kremers, for their paper on "Addition Products of Oxides of Nitrogen to Sesquiterpenes;" third prize, to Henry Kraemer, for his paper on "The Valuation of Vegetable Drugs and Foods." The Hager Memorial Prize was not awarded, and the Maisch Memorial Prize was awarded to A. Van Zwaluwenburg and J. O. Schlotterbeck for their paper on "Structure and Development of Seeds."

Prof. Jos. P. Remington, Chairman, gave the report of the special committee appointed to consider measures for bettering the welfare of the Association. Considering the present financial condition of the Association, the committee advised that the salaries of officers be kept at $2,000 annually. In order to increase more general interest in the Association, the committee proposed that an exhibit of pharmaceutical products be made a feature of the meetings. The report was adopted, and the following committee was appointed to arrange for an exhibit next year at the St. Louis meeting: Prof. Jos. P. Remington, Chairman, and Dr. H. M. Whelpley, a third member to be chosen by the Council.

The report of the Committee on the Status of Pharmacists in Government Employ was given by the Chairman, Geo. F. Payne, of Atlanta, Ga. The report was a very hopeful one, and showed that the status of pharmacists in the three departments of the army, navy and marine service is being very much improved.

The installation of the new officers then took place, Messrs. Remington and Thompson having been appointed to introduce them.

A special vote of thanks was extended the citizens and ladies of Richmond for their exceptional hospitality, and to the local Secretary and the Committee on Entertainment for their efforts in promoting the enjoyment and comfort of the members.

A vote of thanks having also been extended to the retiring officers, the business sessions of the meeting were brought to a close.

SOCIAL FEATURES.

The social features, were exceptionally interesting and enjoyable. On Monday evening President and Mrs. Prescott, assisted by a local committee, held a reception in the parlors of the hotel, which was largely attended, Governor and Mrs. Tyler being among the guests. Tuesday noon there was a carriage drive to various points of interest in and around the city, and Tuesday evening a concert was given by Polk Miller at the hotel. On Wednesday evening Governor and Mrs. Tyler tendered the Association a reception at the Executive Mansion. The reception was a charming affair, and was attended not only by the members and their ladies, but also by a number of well-known medical men of Richmond. There were no business sessions on Thursday, the entire day being given over to pleasure, which was had by a trip to Old Point Comfort and a stop at Newport News on the way down. At the latter place the large dry dock and shipbuilding works were visited and an inspection made of the Government vessels now in process of construction there. The points of interest included in the visit at Old Point Comfort were Fortress Monroe, the National Soldiers' Home and the Hampton Normal and Industrial

School. Some of the party visited the U. S. S. "New York," and after luncheon, which was had at the beautiful Hotel Chamberlin, the ladies were given a sail by Commodore Emmerson, of Baltimore, on his yacht "Nydia." On returning in the evening, Polk Miller, assisted by about a dozen negroes, gave an entertainment at the hotel. A trolley ride was taken on Friday afternoon, and in the evening, Prof. Wm. Simon, of Baltimore, gave an instructive address on "Wireless Telegraphy." The speaker demonstrated the principles of this system of telegraphy and gave a short *résumé* of its history. Thus came to a close a series of entertainments which, interspersed with the business sessions, will long make the Richmond meeting of 1900 a memorable one.

MINUTES OF THE ANNUAL MEETING OF THE COLLEGE.

The annual meeting of the members of the Philadelphia College of Pharmacy was held on March 26, 1900, at the College, 145 North Tenth Street; thirty-four members were present, Wm. J. Jenks presiding.

The minutes of the quarterly meeting of December 28th were read, corrected and approved. The minutes of the special meeting, held March 23d, were read and approved. The minutes of the Board of Trustees for the meetings of January, February and March were read and approved.

The Committee to Revise the By-Laws of the College reported that they had performed the duty assigned them, and submitted a copy of the revised By-Laws. The report was received, and the revised By-Laws as proposed were ordered to lie over for consideration until the next meeting of the College.

The Publication Committee of the AMERICAN JOURNAL OF PHARMACY presented a report covering the period from March 28, 1899, to March 26, 1900, and showing a cash balance to the credit of the Committee.

In the report of the editor of the JOURNAL it was stated, among other things, that the primary object had in view during the past year had been to make the JOURNAL of more general pharmaceutical interest rather than too strongly chemical or botanical in character.

The Librarian reported the addition to the Library of ninety-five bound volumes and thirty unbound volumes, besides the various exchanges, during the year, sixty-five volumes having been added.

The Curator reported that the Museum had received a number of valuable additions during the year, chief among which were a collection of biological cultures and a series of valuable microphotographs of different micro-organisms from the H. K. Mulford Co.; a collection of synthetic chemicals from the Elberfield Co., and a valuable and instructive collection of opiums from Gilpin, Langdon & Co. The report stated that the cabinet of official drugs and preparations that was placed in the reading room last fall was the first of its kind in any pharmaceutical college; that it was constantly used by the students, who appreciated it highly, and to whom it had proved of great benefit. The work of the instructors in preparing and arranging the specimens was commended.

The Chairman appointed the following delegates: To the National Convention to Revise the United States Pharmacopœia, to meet in Washington, D. C.,

on May 2d, Professors Remington, Sadtler and Kraemer; alternates, F. G. Ryan, J. W. England and J. L. D. Morison.

To the Convention of the American Pharmaceutical Association, to meet in Richmond, Va., on May 7th, M. N. Kline, Chairman; C. B. Lowe, F. G. Ryan, Wm. McIntyre and J. L. Lemberger.

To the meeting of the Pennsylvania Pharmaceutical Association, to be held in Ebensburg, on June 26th, H. L. Stiles, W. L. Cliffe, C. A. Weidemann, F. W. E. Stedem and E. M. Boring.

The long and faithful service rendered the College by the Treasurer of the Publication Committee was referred to and commented upon in highly complimentary terms, and a unanimous vote of thanks was extended to Henry N. Rittenhouse for the twenty-five years of faithful work he has given to the College in that important position.

A motion to elect, at this meeting, the two additional members of the Publication Committee, provided for in the proposed revised By-Laws, to assume their duties after the adoption of the revised By-Laws, was agreed to. A motion to elect the Committee on Pharmaceutical Meetings at this meeting was agreed to. George M. Beringer was appointed to fill the vacancy on the Committee on Deceased Members, caused by the death of Charles Bullock.

The election of officers and trustees being in order, Messrs. Ryan and England were appointed tellers, and the election resulted as follows: President, Howard B. French; First Vice-President, Wm. J. Jenks; Second Vice-President, Dr. R. V. Mattison; Recording Secretary, Dr. C. A. Weidemann; Corresponding Secretary, Dr. A. W. Miller; Treasurer, James T. Shinn; Librarian, Thomas S. Wiegand; Curator, Joseph W. England; Editor, Prof. Henry Kraemer.

Trustees for the term of three years: Wallace Procter, Edward T. Dobbins and Gustavus Pile. Trustee for the unexpired term of Dr. C. A. Weidemann (elected Secretary), George D. Rosengarten.

Publication Committee: Henry N. Rittenhouse, S. P. Sadtler, Wallace Procter, Henry Kraemer, J. W. England, J. P. Remington and R. V. Mattison.

Committee on Pharmaceutical Meetings: R. V. Mattison, J. P. Remington, H. L. Stiles, F. W. E. Stedem and Henry Kraemer.

On motion, the meeting adjourned.

W. NELSON STEM,
Secretary.

AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES.

Another attempt was made to establish an alliance of the teaching colleges and schools of pharmacy of the United States, at the Richmond meeting of the American Pharmaceutical Association. A constitution and by-laws were adopted, in which it was stated that the object of this conference shall be the interests of pharmaceutical education; the membership shall consist of duly accredited pharmaceutical faculties, and the time and place of meeting shall be coincident with that of the American Pharmaceutical Association. The officers for the ensuing year are: President, A. B. Prescott; Vice-President, Joseph P. Remington; Secretary and Treasurer, W. H. Bradbury. Executive Committee: J. H. Beal, W. Simon, E. Kremers, J. M. Good and George C. Diekman.

MINUTES OF THE PHARMACEUTICAL MEETING.

The last of the series of pharmaceutical meetings for 1899-1900 was held Tuesday, May 15th, with Prof. Samuel P. Sadtler in the chair.

Mr. Robert N. Riddle, of Philadelphia, gave a short but interesting talk on the manufacture of some of the more important fatty acids, sugar of milk, vanillin, etc. Mr. Riddle prefaced his remarks by saying that the processes for the manufacture of all the finer chemicals are kept secret, and that certain chemicals like vanillin and saccharine are covered over with patents simply to conceal the process of manufacture. He said that very little of the information contained in text-books on the manufacture of chemicals is reliable. The authors are not to blame for this, because it is impossible to obtain the information.

With regard to the manufacture of milk sugar, he said that two conditions are essential for its success, and these are a large supply of whey and means for evaporation. The organic compounds in milk appear to be difficult to precipitate, and it is only by prolonged boiling that they can be separated and a clear solution obtained.

In the manufacture of lactic acid, he said that the raw materials which contain least oil are the most easily fermented, hence rye and barley are to be preferred to other grains in this respect. After giving some of the important details in its manufacture, the speaker stated that this acid is not manufactured in this country—that it is all imported.

In giving the process for the manufacture of butyric acid, he said the statements that the presence of some putrefying animal substance is essential to the butyric fermentation are very erroneous. Nature has provided her own ferments, and these begin their work even while the grain from which the acid is to be manufactured is being boiled.

A paper on "Seidlitz Powders," by Joseph Huntington, P.D., was read in abstract by Prof. F. X. Moerk. The paper will be published in a later issue of this JOURNAL.

Prof. Jos. P. Remington called attention to some jars and glass tanks which had been sent to the College for exhibition, at his request, by the Appert Glass Company, of New York. These vessels are manufactured in all sizes up to a capacity of 40 gallons, and in speaking of this feature Professor Remington said that the use of large glass vessels for laboratory work had long been a desideratum. The special advantages claimed for this glassware are that it is non-porous and possessed of unusual mechanical strength. The jars and tanks may be graduated, and, being transparent, the measure of the contents can be told at once.

Some notes on "Gold and Sodium Chloride" were presented by Lyman F. Kebler, which will be published in a later issue of this JOURNAL.

A specimen of Southern prickly ash bark was exhibited by Mr. Kebler. It was a beautiful specimen, and produced when chewed a sensation similar to aconite.

On motion, the meeting adjourned.

FLORENCE YAPLE,
Secretary pro tem.